

# Railway Age

Published every Saturday by the  
Simmons-Boardman Publishing  
Company, 34 North Crystal Street,  
East Stroudsburg, Pa., with execu-  
tive offices at 30 Church Street,  
New York

With which are incorporated the Railway Review, the Railroad Gazette  
and the Railway Age-Gazette. Name Registered U. S. Patent Office

Vol. 93

October 8, 1932

No. 15

All communications should be ad-  
dressed to the New York office,  
30 Church Street, or to the  
Chicago office, 105 West Adams  
Street

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The 'Railway Age' is a member of  
the Associated Business Papers (A.  
B. P.) and of the Audit Bureau of  
Circulations (A. B. C.).

Subscriptions, including 52 regular  
weekly issues, payable in advance  
and postage free; United States and  
possessions, 1 year, \$6.00, 2 years,  
\$10.00; Canada, including duty, 1  
year, \$8.00, 2 years, \$14.00; foreign  
countries, 1 year, \$8.00, 2 years,  
\$14.00.

Single copies, 25 cents each.

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## RAILWAY AGE

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# The Coolidge Committee's Task

The Coolidge committee, which has been created to investigate the railway situation, is sponsored by life insurance companies, savings banks and other similar institutions having large investments in railroad securities. It is composed of Calvin Coolidge, Alfred E. Smith, Bernard M. Baruch, Alexander Legge and Clark Howell. Former President Coolidge probably enjoys the confidence of as many of the American people as any other man living. Mr. Smith received in 1928 the votes of fifteen million citizens for president. Mr. Baruch was appointed chairman of the War Industries Board by President Wilson. Mr. Legge served as chairman of the Farm Relief Board by appointment of President Hoover. Mr. Howell is editor and publisher of the Atlanta (Georgia) Constitution, and an able and eminent leader in the thought and business of the South. A committee composed of such men cannot fail to do a work of importance or to inspire general public confidence in its conclusions.

### What Is the Matter With the Railroads?

The real subject of its inquiry is, what is the matter with the railroads, and what should be done about it. Investors in their securities want to know why they are a virtually bankrupt industry and why many of them would be unable to pay their fixed charges and would be in receivership excepting for the large loans that they are receiving from the federal government. Railway employees want to know why the number of their employees has declined by 700,000 since five years ago, and why they are confronted with demands for a large reduction of wages. Industries which are dependent upon them for a market want to know why their annual purchases have been reduced from a normal average annually of about two billion dollars to the abnormally low amount of about 600 million dollars. Producers and shippers want to know why it is necessary to maintain freight rates under present conditions at a level about 45 per cent higher than before the war. The entire public wants to know whether

railroad service is going to continue to be essential to its economic welfare, and, if so, what can and should be done to make it adequate enough, good enough and cheap enough to accomplish the economic purposes for which it is provided.

The principal task of the Coolidge committee will be to determine the causes of the present railway situation. If it determines the causes, its next most important task of proposing remedies will be comparatively easy. It will be difficult for it to decide upon the causes owing to the fact that there will be controversies regarding every cause, excepting one. The principal cause, of course, is the depression, to which is mainly owing the fact that railway gross earnings have declined about 50 per cent since 1929. The real question is as to other causes, and as to the extent to which each of them has contributed to the present situation. It is to be hoped and expected that, regardless of the controversies that will rage regarding other causes, a committee composed of such men will fearlessly state and appraise them, if given opportunity. We say, "if given opportunity," because it will not be given opportunity unless all who can give it facts will courageously do so. The danger that it will not be given all the facts it should be, especially by representatives of railway management, is very real because this cannot be done without antagonizing powerful interests and classes.

### Regulation and Management

The committee cannot do well the work for which it has been created without inquiring into the subject of regulation, and especially as to whether the Interstate Commerce Commission has been given too much power and has used its power fairly and wisely during the last decade. Fortunately, the committee is not a government body, which almost certainly would not be thorough and fearless in inquiring as to why, year after year, before the depression, when the railways had an abundant traffic and commodity prices were relatively high, they failed to earn the net operating



income which they were assured by the Transportation act.

As it does not in any way represent railway managements, but those who have directly and indirectly invested billions of their savings in railway securities, it is to be assumed that the Coolidge committee will be as merciless in inquiring how the railways have been managed as how they have been regulated. Have railway executives invested capital unwisely? Have they worked together as they should have to solve the problems of the railroad industry? Have they been responsible for competition between the railways themselves which has caused wasteful duplications of service and prevented advances and caused reductions of rates that have made unnecessary drains upon earnings? Have they, for competitive reasons, made concessions of various kinds to shippers which, in the long run, have done individual railways no good and have unnecessarily reduced net operating income? Will consolidations reduce wasteful competition between the railways, or, no matter how many consolidations are made, will there still exist the necessity for the managements of railways to co-operate more closely to prevent wastes? Perhaps the railways have been more sinned against than sinning; but they have done a good deal of sinning themselves, and it is to be hoped and expected that the Coolidge committee will be relentless in inquiring about and criticizing the shortcomings of their managements.

#### Taxation and Subsidization

To what extent have the railways been injured in years of both good and poor business by excessive taxation? In 1919 their taxes were \$239,000,000, and in 1929, \$403,000,000. They have suffered with other industries and all the people from the orgy of government spending during the last ten years which has so greatly increased all taxes.

One of the most controversial questions before the committee will be that of competition between the railways and carriers by water and highway. Is it fair to the railways or in the interest of the public for the government to spend hundreds of millions of dollars upon waterways and let them be used without charge by carriers in direct competition with the railways? Is it fair or economically sound for the government itself at a loss to the taxpayers, to operate a barge line on the Mississippi river in competition with the railways? To what extent are carriers by highway actually being subsidized by the federal and state governments, and should they not be charged enough for the use of the highways to compel them to render their service entirely at their own cost, and not largely at the taxpayers' cost? Is it fair to the railways to subject them to strict regulation of their service and rates while applying no comparable regulation to the service and rates of carriers by water and highway? If not, should the regulation of competing carriers be equalized by reducing railway regulation, or increasing the regulation of other carriers, or by both methods?

Is it fair to the railways and their employees to allow carriers by water and highway to employ men under any working conditions and at any wages they please, with the result of either diverting traffic and employment from the railways or compelling them, in order to save themselves, radically to change the working conditions and wages of their employees?

#### The Railway Labor Question

One of the most difficult and controversial questions which the Coolidge committee will have to investigate and express its opinion on, if its investigation is to be of any value, is the question as to the working conditions that should prevail and the wages that should be paid upon the railways. The facts must be faced that commodity prices have declined to the pre-war level, while the average hourly wage of railway employees is much higher than before the war, and that to maintain the present average hourly wage and reduce freight rates would bankrupt the railroad industry.

The present average hourly railway wage is due in large measure to working conditions as a result of which some classes of employees are being paid a day's wage for working much less than a day and that some are being paid for work not done at all. There are many railway officers and students of the railway problem who are as anxious as anybody to see railway employees paid high wages, but who fear that as a result of the vital economic changes that have occurred during the depression the railways cannot make the reductions in their operating expenses and rates necessary to getting an adequate volume of traffic without very important changes in present working conditions and wages.

Railway labor leaders are advocating a six-hour day at eight hours pay as a remedy for railroad unemployment and the Interstate Commerce Commission is making a fact-finding investigation of this demand. Undoubtedly when general business improves, commodity prices will increase, and the incomes of farmers and other persons will be favorably affected by the increase, but in view of all experience following great wars it is not reasonable to expect that commodity prices will be restored to the level of the decade ending with 1929 until there is another great war. This being the case, it would appear that the cost of railway transportation must be reduced to make it possible for the railways fully to recover their traffic through readjustments of rates, and one of the most important questions upon which the Coolidge committee should express an opinion is the question as to what should be done about railway working conditions and wages.

The report of the Coolidge committee will not settle anything. It is to be hoped, however, that it will help inform and crystalize opinion regarding the nation's great transportation problem and thereby help to make it easier to get done those things that must be done if that problem is to be solved fairly and in the interest of all classes.



## Motor Manufacturers and Highway Transport Policy

In a cleverly worded address before the National Petroleum Association in Atlantic City on September 14, Pyke Johnson, vice-president of the National Automobile Chamber of Commerce, endeavored to dismiss entirely all criticisms leveled at unregulated truck transportation. The obvious inference to be drawn from his remarks is that there is no highway transport problem. He lists the following as "widespread fallacies" which "face those who are interested in getting the facts of modern day transportation":

1. The motor truck is responsible for the present day plight of the railroads.
2. The motor truck owners do not pay a fair share of highway costs.
3. The motor truck does undue damage to the highway.
4. Ownership of motor vehicles is an evidence of wealth, and hence the motor vehicle should be an instrument for taxation of all kinds.
5. As a broad cure for all of these ills there is suggested a fifth fallacy which is that regulation, restriction and taxation of the vehicle will straighten everything out.

As for his first contention, that it is false to assume that the motor truck is responsible for the present plight of the railroads, we may say that the more conservative of recent estimates places at around 10 per cent the proportion of inter-city ton-mileage being handled by trucks. We know also that the commodities transported by truck are those which carry the higher rates, and therefore that the loss in revenue to the railroads is in greater proportion than the loss in tonnage. We know also that unregulated truck competition has a depressing effect on railway rates even for a traffic which continues to move by rail. And any observer on our highways knows that inter-city trucking has increased, while all other lines of business have decreased, during the depression. No one asserts that the railroads would be living in luxury if there were no truck competition, but anyone who will honestly survey the easily-ascertainable facts cannot avoid the conclusion that if the major portion of the traffic now moving long distances by truck were restored to the railways, their troubles would be mild in comparison with their present gravity.

As to the "fallacy" that motor truck owners do not pay a fair share of highway costs, we have only to cite the fact that total highway expenditures are approximately double total motor vehicle tax receipts; that gasoline taxes weigh much more heavily on light vehicles than on the heavier ones; and that the motor industry claims credit for taxes paid by city vehicles which do not use the rural roads at all. No greater authority for judging the fairness of a basis of motor vehicle taxation exists than the report on the subject recently published by a British commission composed of railway and motor transport interests acting under the chairmanship of the distinguished economist, Sir Arthur Salter. The commission recommended a license fee and gasoline tax of more than \$1300 for a 5-

ton (net load) truck which the Bureau of Public Roads and automotive interests in this country seem to think ought to pay about \$200.

To say that heavy trucks do not do undue damage to the highways is to belie the observation of every alert motorist.

Concerning the fourth "fallacy," i.e., that the ownership of a motor vehicle is an evidence of wealth and hence a subject of taxation of all kinds, we believe that Mr. Johnson is exercising himself over a myth. Motor transport, on the average, does not yield enough revenue to the government to repay the government for its outlays which make motor transport possible. If the levies which the motor transport industry calls "taxes" are really such, then the rent a merchant pays for his store is also a tax and the money railroads spend to maintain and pay interest on the investment in their roadway should be credited to their tax payments. Taxation in the ordinary sense of the word is a matter entirely foreign to the experience of motor transport and Mr. Johnson is tilting at a ghost which he himself has conjured up.

As to Mr. Johnson's fifth "fallacy," that regulation, restriction and taxation of commercial motor transport will solve present difficulties, only time will disclose the answer. But it is perfectly evident to almost everybody but Mr. Johnson and some of his associates that the problem is growing worse at staggering speed and is threatening with ruin not only the railroads, but the farmers, the regular retail and wholesale trade, the taxpayers and our national economic life as a whole. Belittle the problem as he may, Mr. Johnson will not deceive those who come into intimate contact with it—not only railroad men, but shippers, farmers, private motorists and many other classes as well. And those who do come in contact with it recognize its seriousness and are eager to solve it and this they propose to accomplish by the very means—reasonable regulation, restriction and taxation—which are so plainly anathema to Mr. Johnson.

It might in the long run pay the automotive industry if it would proffer reasonable assistance in the solution of the problem. By manifesting a more co-operative spirit it might satisfy the interests concerned in the problem in a way to secure the maximum consideration of its point of view. But if it refuses this co-operation, and continues to persist in the denial of the very existence of any such problem, it can have little complaint if the solution achieved without its aid is little to its liking. Already local and common carrier truckmen, agriculturists and shippers are beginning to rebel at having automotive manufacturers and persons dominated by them serve as their spokesmen. The railroad industry knows from bitter experience that a pendulum pushed too far may swing just as far the other way. Will the automotive industry insist on learning the same lesson by its own experience rather than profiting from that of others? We hope not, but we find nothing in Mr. Johnson's address to lead anyone to any other conclusion.

# A New Approach to the Grade Separation Problem

Fewer crossings and better railway service to industries are essential elements of policy pursued by engineers' committee at Detroit

**T**HE separation of the grades of railway tracks and city streets for the purpose of eliminating grade crossings has not always been an unmixed blessing. This fact received prompt recognition in the courts when property holders brought suit for alleged damages accruing as a consequence of changes in street grades pursuant to grade separation projects. As a result the railways and public bodies that participated in such work came to recognize adjacent property damage as a necessary element in the cost, and also as a factor to be given consideration in the development of plans for such work. But it has remained for a committee at Detroit, Mich., representing the railroads, the property holders and the public to show how grade separation can provide the means of enhancing rather than depressing the value of adjacent property and afford the opportunity for a marked improvement in the effectiveness of the railways as a transportation utility in urban areas. Furthermore, it points the way to decreased outlays for such projects.

That this idea should be so long delayed is easily explained. It had to await the crystallization of a new

congestion forced by a stupendous growth in population and industrial activity resulted in a city-wide demand for a freer flow of street traffic. In the investigation of the requirements of industrial traffic, it became apparent that the industrial territory, served by some 960 miles of tracks within the corporate limits, was being rapidly rendered useless to industrial occupancy by the practice of permitting every street, important or otherwise, to cross the tracks.

## Had Its Inception in 1925

The study of a grade separation plan for Detroit was begun in 1925, following the creation of a master plan of thoroughfares designed by the Rapid Transit Commission as the base plan for future rapid transit and traffic facilities. It became apparent that unless strong steps were taken to avoid it, the pressure of local interests would continue to create surplus crossings and give rise to wasteful expenditures for improvements in later years. It was seen by a few that there was an urgent need for a study of the grade crossing problem as a whole under auspices that would bring together the interests of the city, the railroads and the owners of adjacent industrial properties, with a view to the development of a comprehensive plan that embodied a revision of the street plan as well as grade separation.

Continued discussion of this subject led eventually to the organization of a committee on grade separation by a group of manufacturers, known as the Milwaukee Junction Manufacturers Association, which was later joined by other groups so that eventually 415 indus-



An Example of Grade Separation Practice of a Decade or More Ago—The Close Spacing of Street Overcrossings Precludes Satisfactory Industrial Development—Parallel Highway on the Left Might Have Been Used as a Header Street to Connect Up Transverse Streets Stub-Ended by the Omission of Crossing Structures

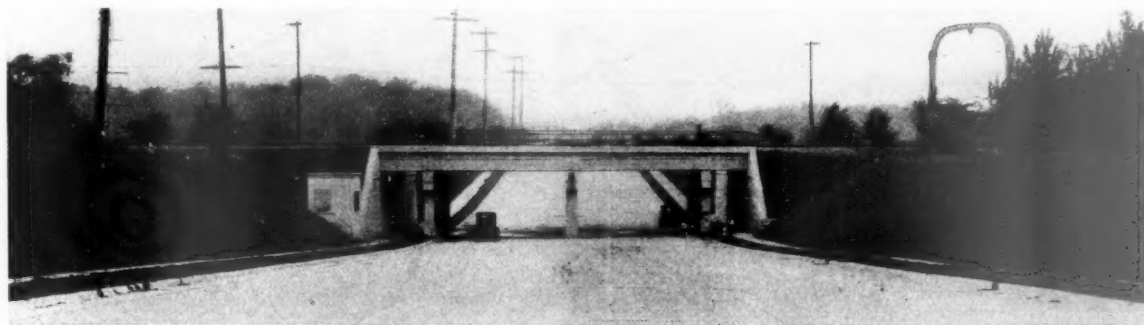
attitude toward the function of the city street as it had been modified as a consequence of the changes in the character of street traffic. That the plan should have its birth in Detroit is equally simple. Little grade separation work was done in that city until the traffic

trial plants located in that part of Detroit lying east of Woodward avenue were represented. This area embraced 40.23 line-miles of railway, of which all but 0.83 miles is owned either by the Michigan Central or the Grand Trunk or by terminal subsidiaries of these



two companies. This committee invited the railroads and the public service bodies of Detroit and of the two separate municipalities of Highland Park and Hamtramck to participate in the discussion, and on November 4, 1929, an engineers' committee was organized to carry on the detailed investigation. This committee, which included representatives of the manufacturers, the railroads and the public, was made up as follows: Russell R. Rees (chairman), plant engineer, Packard Motor Car Company; J. F. Deimling, until recently chief engineer, Michigan Central, followed in representation of that system by E. R. Lewis, principal assistant engineer; John W. Reid, commissioner, Depart-

the private property fronting on them. These functions have their counterpart in railway lines in cities which must not only handle through and transfer movements but also render a local spotting and pick-up service which is of utmost importance to the railway and the property owners and, indirectly, to the city as a whole. However, with the transition in the character of street traffic following the advent of the motor vehicle has come a marked change in the conception of the functioning of streets. Traffic authorities have seen the wisdom of concentrating through traffic on a limited number of specially designated thoroughfares that are being widened and otherwise improved for this purpose.



Marked Changes in the Character of Street Traffic Have Created a Demand for Arterial Highways of Great Capacity

ment of Public Works, followed by Joseph L. Barton, grade separation engineer; F. P. Sisson, principal assistant engineer, Grand Trunk Western; J. P. Hallihan, chief engineer, Rapid Transit Commission, and E. M. Walker, consulting engineer for the Milwaukee Junction Manufacturers Association.

#### Developed Basic Principles

This new approach to the grade separation problem was not founded exclusively on a study of the specific conditions encountered at Detroit. Rather, it is the result of an effort to arrive at the general considerations that should govern the solution of such problems in all cities. Studies of many grade separation projects led to the conclusion that whereas the increasing complexity of urban life had given rise to the need for city planning, traffic routing and zoning, grade separation plans were still being influenced largely by precedents established in separation work that was completed before these new movements had received any recognition.

Thus, much of the grade separation in cities occupying a flat terrain has been modeled after the plan adopted in Chicago in the early nineties, where resort was had to track elevation and no other solution was considered than that of providing underpasses for all, or nearly all, of the intersecting streets, for at that time one street, potentially at least, was about as important as another. The effect that this had in the way of property damage was recognized in the assumption by the city of the liability incurred, as practically its only share in the cost. What effect it had on the service rendered by the railroads to property adjoining the right-of-way was deemed a problem in which the city had no part, although anything that affects the cost of such service and, therefore, the usefulness of the property is of vital interest to any city.

#### The Functions of Streets and Railways

Streets, according to the committee, have always served two functions, (1) to provide a means of travel from one point to another and (2) to afford access to

leaving the remaining streets to serve solely as a utility for the local property holder.

In view of this, therefore, and the further fact that an occasional detour of a few blocks is no hardship with present-day street vehicles, the committee came to the conclusion that there is no longer any justification for maintaining the continuity of all streets across the railway right-of-way in carrying out a grade separation project. As a matter of fact, they contend that all interests are best served if the number of crossings is confined to the minimum required to meet the needs of adequate through routes for street traffic, street-car lines, the prompt movement of fire apparatus and access to parks and schools.

Property adjacent to railway tracks attains its greatest value when utilized for industrial or commercial purposes, and such use is greatly facilitated when the spacing of streets is sufficiently great to permit of consolidated holdings in relatively large areas. A subdivision of adjoining land in blocks of the ordinary size serves as a deterrent to normal industrial expansion and efficient use of property. In general, streets and tracks serving industrial property are most effective when located on the same level and this condition is disturbed to the least extent if grade separation work is carried out in such a way as to provide for the widest possible spacing of streets that cross over or under the railway right-of-way.

#### How the Committee Works

This committee has no official status but was organized solely for purposes of study under auspices that would insure a fair hearing for all parties in interest. It was decided early in the deliberations that the problem must be considered as a whole and it was found that of 199 potential crossings, 139 had already been recognized as actual crossings. Of these, 32 have been converted to grade separated crossings, half of which are massed at streets at short intervals in continuous sections. Further study showed that on a part of the work already accomplished the grade separated crossings averaged



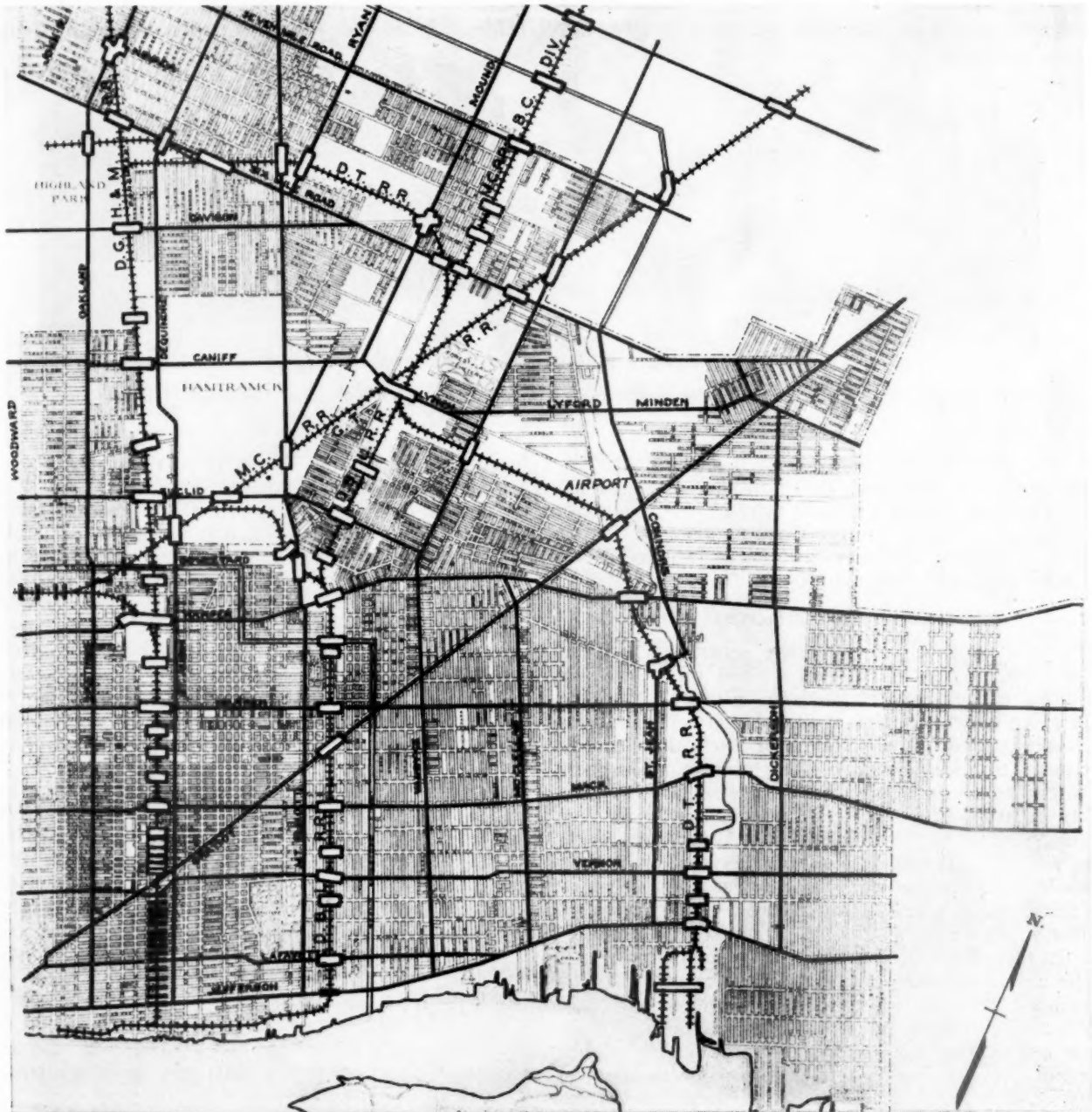
15.3 per mile and on another part 6 per mile or a weighted average of 13 per mile.

In its first report, the engineering committee contended for a complete reversal of this policy, stating that the great increase in volume of traffic all over the city required a plan that will put the main-traveled arteries and proposed new major thoroughfares at regular intervals first on the list for the elimination of grade crossings. This can be done only following the design of the general thoroughfare plan and setting up a

the fire department, to consider the requirements of the industries from the standpoint of present operations, plant expansion, and street and industrial track service, and to effect the maximum economy in the entire grade separation plan.

#### Header Streets

One feature to which the committee has given particular attention is the local revision of street systems through the agency of header streets paralleling the rail-



General Grade Separation Plan for the Area East of Woodward Avenue, Detroit, Mich.—Note the Close Spacing of the Completed Separations (Shown in Solid Bars) Compared with the Wider Spacing Advocated for the Work Still to be Done (Indicated by the Rectangles)

definite program within the financial resources of the city and the railroads.

Its studies of individual projects, of which 70 have been investigated to date, have been conducted with a view to the meeting of certain fundamental ideas, namely to conform to the requirements of the master plan of the city for through traffic highways, to provide necessary access to parks and schools and meet the needs of

way right-of-way, whereby all streets scheduled to be stub-ended by the plan for limiting the number of grade separations will be afforded convenient and adequate access to the nearest streets for which grade separated crossings are to be provided. An important element of this plan is to locate the header streets far enough away from the right-of-way lines to provide adequate room for unhampered industrial expansion.

While, as stated above, the work of the committee has no official status, each project considered is studied in sufficient detail to permit of tentative agreement on all the essential elements. This was set forth in the committee's first report as follows:

"Your committee has therefore sought (1) to define the position and number of grade separations regardless of the period at which they may be constructed; (2) to determine the permanent profile of the railroads; (3) to determine the character of structure at each point of separation of grades; (4) to outline a program of construction that will give preference to the thoroughfares that will most greatly facilitate the free movement of traffic."

### Less Crossings Required

One of the most important results of these studies lies in the potential reduction in the cost of the work when it is eventually carried out. Instead of a possible 199 separations that might be demanded in the absence of an improved plan, there are now contemplated but 73 or 2.2 per mile, in contrast to the 32 that were already massed in less than three miles of line.

A further insight into the work of this organization and into some of the policies that have governed its deliberations is afforded by the following abstract from an article by J. P. Hallihan, chief engineer, Detroit Rapid Transit Commission, which comprised a part of the report of the Committee on Grade Crossings of the A.R.E.A. that was presented at the convention on March 15.

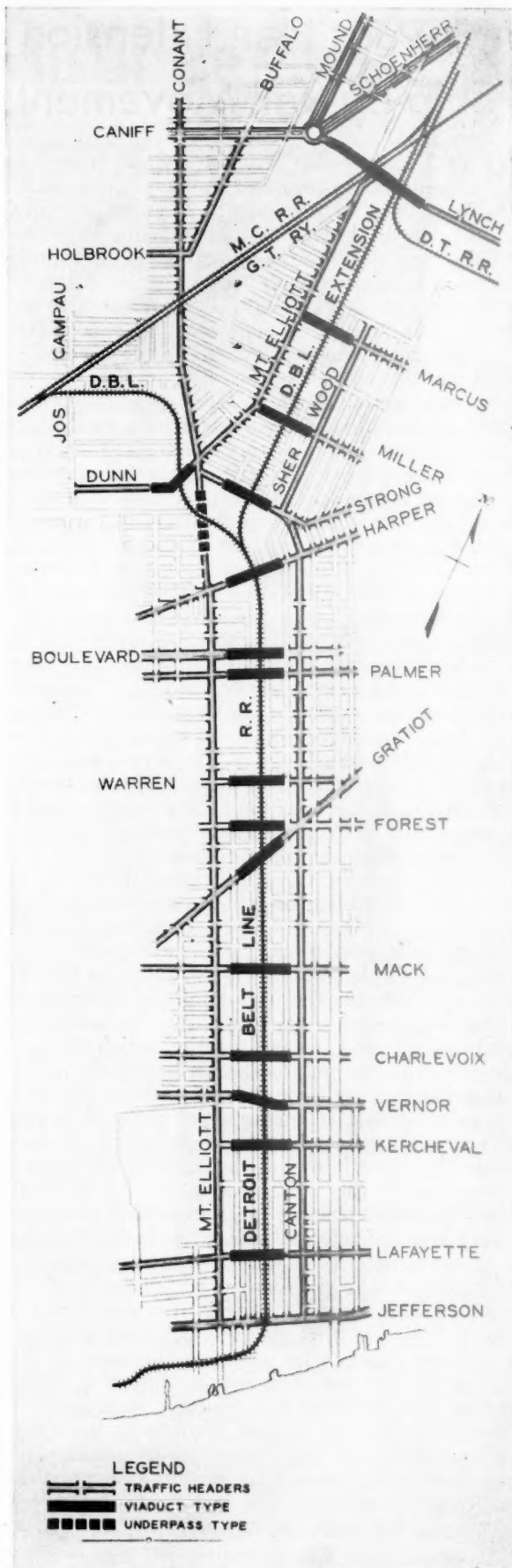
"The work of the committee is regarded as an important forward step in regional planning. It is the first time in any city, so far as known, that all the various public and private interests concerned in the problem of elimination of grade crossings have been brought together to find the best solution from a non-partisan, common-sense, economic viewpoint.

"The result has proved the value of the participation of the railroads in civic matters. Controversial questions that had long been the subject of discussion between railroad and railroad, and between city and railroad, were speedily and amicably settled with the help of industry, the third and most important party in interest, highly qualified to act as a balancing factor.

"Incidentally, the committee declined to consider the question of division of costs between the city and the railroads, but three of its members invited by the common council to sit on a special city committee to determine that question with an individual road, defined the elements that should enter into the accounting, for whatever division of the total might be agreed upon between the parties interested in the light of other conditions. There is no effort to accelerate the construction program, though it is recommended that preference be given the major thoroughfares serving industrial traffic.

### Indecision and Waste Eliminated

"The net result of the work of the committee is to eliminate a condition of uncertainty, indecision, impermanence and waste. In lieu of this it offers a definite workable plan in line with modern requirements, to be accomplished as needs dictate and circumstances permit. Perhaps the most important immediate benefit is derived by the cities and the railroads who are now in position to assure new industries seeking locations, of the exact position of the track profile, of projected thoroughfare openings, or probable land takings, and of the elimination of unwarranted local street intrusions into industrial territory."



A Typical Unit Project as Developed According to the Detroit Plan—Spacing of Street Over or Under Crossings Is Sufficient to Allow Effective Industrial Development—Note that Header Streets are Set Back Two Blocks From the Railroad



## Employees Plan Extension of Ship-by-Rail Movement

**A**PPROXIMATELY 75 delegates, representing Ship-By-Rail Clubs and Railway Employees' and Taxpayers' Associations in 21 states, met in Chicago on September 30 to take preliminary steps toward extending these organizations to other states and toward the formation of a national body to serve as a point of contact for the various state associations and to coordinate their activities. The meeting was called by W. L. Hullinger, vice-chairman of the Minnesota Ship-by-Rail Club.

It was decided that the setting up of a permanent national organization at the present time would be premature. Those in attendance from each state were asked to designate one of their number for membership on a general committee to direct the affairs of the new body during the formative period and this committee, in turn, chose the following executive committee: H. H. Parker, president, Railroad Employees and Taxpayers Association of Virginia; G. L. Phillips, treasurer, Kentucky Railway Employees and Citizens League; W. L. Hullinger, vice-chairman, Minnesota Ship-by-Rail Club; E. J. Foley, president, Railroad Employees and Taxpayers Association of New Jersey; and C. E. Macintosh, representing Union Pacific Boosters Clubs. This committee chose Mr. Parker as its chairman, H. O. Hewitt, president of the Ohio Railroad Employees and Citizens League, as its secretary, and Mr. Phillips as treasurer.

The temporary organization as at present constituted, is to restrict its activities entirely toward keeping constituent associations in contact with each other and to encouraging the formation of associations in other states. No constitution or by-laws were adopted since, in the opinion of the convention, such action would be premature. A resolution was unanimously adopted, however, which pledged the organization "to restrict its activities to fostering the use of railway transportation, and working in every legitimate way for correction of inequalities in regulation and taxation which exist as between the railways and competitive methods of transport," and in no case to deviate from this policy in such a way as to assume functions which properly belong to other parts or organizations in the industry. It was also made clear that it was the sense of the meeting that the purposes of the movement could not be attained without "the wholehearted and sympathetic co-operation of every element of the railroad industry," and that such co-operation would not be vouchsafed unless the organization should give convincing evidence of its intention to follow without deviation its announced policy. It was pointed out that these associations provide the only existing agency "for enlisting the support of the public outside the industry, which support is indispensable to a solution of pressing railway problems."

There was but one formal address at the meeting, which was delivered by Paul V. Scheunemann, traffic manager of the Monarch Elevator Company. Mr. Scheunemann presented the importance of adequate regulation and taxation of agencies of transportation competitive with the railroads from the standpoint of a shipper along the same lines as set forth in his address to the Minnesota railroad employees, reported in the *Railway Age* of September 24, page 435. Other discussion, aside from that in connection with organization, centered largely around informal reports made by the leaders of the various state associations as to competi-

tive conditions in their respective territories and their activities in endeavoring to encourage patronage of the railways and to secure needed legislation and the enforcement of existing statutes governing highway transport. A temporary name, "National Railroad Employees and Taxpayers Association," was adopted.

## Railway Purchases—Six Months

**C**LASS I railways of the United States expended \$223,700,000 in the markets of the country for materials and supplies during the first six months of 1932, exclusive of locomotives and cars and materials acquired in lump-sum contracts for various railroad construction work, according to special reports received by the *Railway Age* from the railroads. This sum includes \$84,750,000 for locomotive fuel and \$138,350,000 for miscellaneous supplies, the latter consisting of \$14,850,000 expended for ties, \$11,550,000 for rails and \$112,550,000 for repair parts for locomotives and cars, track materials, stationery, supplies for dining cars, etc.

The corresponding expenditures in 1931 were \$386,050,000. Aggregate purchases were approximately 18 per cent lower in June, 1932, than in June, 1931, and show a greater decline from the expenditures made in

Railway Purchases—First Six Months, 1931 and 1932\*

	Fuel	Ties	Rails	Other Materials	Totals
<b>1932</b>					
Jan., 1932..	\$15,450,000	\$2,000,000	\$1,550,000	\$19,400,000	\$38,400,000
February ..	15,300,000	1,850,000	4,050,000	19,000,000	40,200,000
March ....	17,500,000	3,100,000	1,250,000	20,750,000	42,600,000
April .....	13,250,000	2,250,000	1,750,000	18,750,000	36,000,000
May .....	12,500,000	2,750,000	2,000,000	17,750,000	35,000,000
June .....	10,750,000	2,850,000	950,000	16,950,000	31,500,000
Six Months.	\$84,750,000	\$14,850,000	\$11,550,000	\$112,550,000	\$223,700,000
<b>1931</b>					
Jan., 1931..	\$22,100,000	\$4,750,000	\$7,550,000	\$33,000,000	\$67,400,000
February ..	20,500,000	4,300,000	4,600,000	32,600,000	62,000,000
March ....	21,550,000	6,150,000	8,150,000	36,950,000	72,800,000
April .....	21,000,000	5,850,000	7,750,000	31,500,000	66,100,000
May .....	18,950,000	5,500,000	5,550,000	31,250,000	61,250,000
June .....	18,450,000	4,800,000	5,150,000	28,100,000	56,500,000
Six Months.	\$122,550,000	\$31,350,000	\$38,750,000	\$193,400,000	\$386,050,000

\* Represents direct purchases by companies located in United States only. Indirect purchases and equipment not included. Subject to revision.

the month of March. There were 24 railroads out of a total of 65 which expended \$1,219,000, or 14.5 per cent, more in June than in January, while expenditures made for ties by all the roads were larger in June than in any previous month this year.

Partial figures indicate that stocks of supplies on Class I roads, exclusive of scrap iron, amounted to

Supplies on Hand, January and August, 1932

	Fuel	Ties	Rails	Other Materials	Totals
January ...	\$22,800,000	\$83,100,000	\$47,500,000	\$195,500,000	\$348,900,000
August ...	21,500,000	74,000,000	48,000,000	180,000,000	323,500,000
Reduction ..	\$1,300,000	\$9,100,000	+\$500,000	\$15,500,000	\$25,400,000

\$323,500,000 on August 1, as compared with \$348,900,000 on January 1, a reduction of \$25,400,000, or 8 per cent, the inventory consisting of \$21,500,000 of fuel stores, \$74,000,000 of ties, \$48,000,000 of new and second-hand rails, and \$180,000,000 of miscellaneous supplies. Since the first of the year, tie stocks have been reduced by \$9,000,000, or 11 per cent, while stocks of miscellaneous materials have shrunk \$15,500,000, or 8 per cent.



# Transportation Act Misunderstood as to Control of Competition

Provisions of present law eminently satisfactory  
for dealing with this problem

By Mark W. Potter

**T**HERE is some misunderstanding as to what the law is relating to the problem of lessening competition among railways. In the interest of soundness of general view, and of progress on this important matter, there may be warrant for correcting some erroneous conceptions.

Carriers are at liberty, under the existing law, with the approval of the Interstate Commerce Commission, to take such steps as are necessary to eliminate all wastes that are due to competition that is excessive in a strict economic sense. The Commission is in favor of such steps being taken by the carriers.

The present law is not forcing the railroads to meet unfair competition. It is not requiring them to compete unreasonably with each other. They may under the present law enter into sound businesslike arrangements for the division of traffic or earnings so that each will receive a fair share without waste in competitive solicitation. It is not necessary by any additional law or regulation to permit them to divide traffic and so eliminate some of the present wastes because the present law provides such permission. There is no need that the Interstate Commerce Commission be relieved of requiring competition where traffic is insufficient to support competing lines. There is no obligation on the part of the Commission to require such competition. The Commission has authority under the present law to provide carriers with full protection in the making of plans to eliminate competition.

## Wasteful Competition Can Be Eliminated

The necessity for elimination of competition was fully appreciated by the Congress of 1920. In the Transportation Act enacted in that year the Congress provided a way for the prompt and complete elimination of wasteful competition. Prior to 1887, the railways to protect themselves against the consequences of wasteful competition had very generally entered into arrangements to divide traffic. At that time, competition was ruining the carriers as it is today. Arrangements to divide traffic saved them. The competition took the form of rebates and secret rate-cutting to obtain traffic.

When the Interstate Commerce Act was drawn in 1887, shippers had great influence. They wanted rate-cutting and rebates. Under that influence, the Congress inserted in the Interstate Commerce Act a provision prohibiting arrangements to divide traffic. The year of 1887 was about the beginning of the era marked by the regarding of extreme competition as a virtue. The Sherman Law forbidding the restraint of competition was enacted as were many other similar federal and state laws. As a result of such laws, competition again became rampant among the railways. In time, rebating and secret rate-cutting were prohibited. The Interstate Commerce Commission was given jurisdiction

over rate-making and rates could not be made except on notice. Rates became stabilized and the same over all routes between competing points. Shippers came to realize that stability of rates was more important than the rate level. Therefore, the reason for prohibiting by the Interstate Commerce Act the making of arrangements to divide traffic, had disappeared.

## New Forms of Competition

There had, however, developed new forms of competition to obtain traffic more vicious and destructive of carrier prosperity than the old practice of rebating and rate-cutting. Solicitation, advertising and off-line traffic activities, which served no purpose except to divert traffic from one carrier to another, were indulged in to such an extent, that during the year 1929 about seventy million dollars was expended for such purposes. With the same purpose of attracting traffic, wasteful competition in the handling of traffic developed, as well as all sorts of practices to please shippers, which all carriers deplored and which all would stop if others would, but which competition required all to follow.

By 1920, it was seen that competition again was ruining the railroads as it had been prior to 1887, until they made arrangements among themselves to divide traffic. By 1920, it had been seen that the Sherman Law and other anti-trust laws which prevented railroads from making arrangements to divide traffic were out of date. Thereupon, the Transportation Act of 1920 restored to the carriers permission to deal with competition and to restrict it. Section 5 of the Transportation Act had this purpose, and it provided three ways to control and do away with competitive wastes.

## Division of Traffic or Earnings

Paragraph 1 of Section 5 expressly authorized competing railroads to enter into arrangements "for the division of their traffic or earnings to the extent indicated by the Commission," to "be in the interest of better service to the public, or economy in operation" and as would "not unduly restrain competition." The vice of competition was recognized and it was to be done away with. However, recognizing, of course, the clear and absolute responsibility for protecting the public against any abuse of monopolistic power, the arrangements to divide traffic and so eliminate some of the present wastes, were to have the approval of the Commission which was authorized to say how far the arrangements to divide traffic should be allowed to go and what restraint would be undue.

And the Congress went still further and in paragraph 2 of Section 5 authorized one carrier to acquire control of another under lease or by the purchase of stock where the Commission found that such acquisition to the extent indicated by the Commission would be in the public

interest and empowered the Commission by order to approve and authorize such acquisition. The purpose of the acquisitions to be had under paragraph 2 of Section 5 was to provide a unified single head management which would lessen or do away with competition. Again to protect the public against any abuse of monopolistic power the Commission was given power in authorizing acquisitions of control under paragraph 2 to make such rules and regulations and impose such terms and conditions as the Commission should deem just and reasonable to protect the interests of all concerned.

#### Consolidation of Railways

In paragraphs 4, 5 and 6 of Section 5, the law went still farther and provided a scheme for the consolidation of railways generally in a limited number of systems. In providing for permanent actual consolidations, the idea of competitive systems was preserved so as to prevent carriers from having monopolistic power which they might use in disregard of the Commission. The plan contemplated bringing together in single systems companies that naturally would aid and supplement one another. Consolidations once consummated by the issuance of securities could not be unscrambled. Monopolistic power once created could not be recalled. So the scheme of the law was to require that competition be preserved in the creation of permanent consolidations. But in operating the competitive consolidated systems to be set up, the carriers were at liberty under paragraph 1 of Section 5 to do away with wasteful competition under the supervision of the Commission. Competition was to be dealt with under a flexible plan that could be altered from time to time as conditions might suggest.

#### Relief from "Anti-Trust" Laws

Paragraph 8 of Section 5 relieves the carriers from the restraints or prohibitions of all "anti-trust laws," state or federal, insofar as necessary to enable them to do anything authorized by the Commission.

It would be difficult to conceive of a law which more completely and more satisfactorily dealt with the subject of competition than does the present law. Any sound businesslike plan that the Interstate Commerce Commission approves of can be made under paragraph 1. All carrier wastes resulting from competition are the results of endeavors to obtain traffic from one another. With arrangements among carriers, protecting the revenues of all through agreed divisions of traffic or earnings approved by the Commission, they could, without going to the Commission for further authority, eliminate waste to an extent that would relieve them from their distress.

#### Attitude of I. C. C.

That the carriers, with the approval of the Commission, may have exemption from all requirements of excessive competition, is established by the decisions of the Commission. The line of the Central Pacific Railway Company extending from Ogden, Utah, to Oakland, California, was a line essentially competitive with the southern line of the Southern Pacific Railway for trans-continental traffic. The Southern Pacific acquired the stock of the Central Pacific and a lease of that property. In 1912 the government brought a suit under the Sherman Law to disrupt that relationship. The Supreme Court decided that the Southern Pacific control of the Central Pacific violated the law and ordered a separation.

The Sherman Law in effect in 1912, when the suit was begun, controlled the action of the Supreme Court

which could not give to the Southern Pacific the exemption from the Sherman Law provided by the Act of 1920. After the decision by the Supreme Court requiring the Southern Pacific to surrender the Central Pacific, the Interstate Commerce Commission acting under the Transportation Act of 1920 allowed the Southern Pacific to reacquire and have the Central Pacific. This action by the Commission was because of the power to control and eliminate competition and grant relief from the Sherman Law and other laws imposing restraint and prohibition, that was given to the carriers and to the Commission by the Transportation Act. In several other cases, carriers applied to the Commission for leave to make partial consolidation of their competitive traffic activities and to divide traffic on fair terms in the interest of the carriers and the public. The Commission granted every such application made to it.

The fact that carriers generally in all sections of the country have not brought wasteful competition to an end is no fault of the law or of the Interstate Commerce Commission.

#### Changes Can Be Made Quickly

There is no way to hurry consolidations. Whether and when they are to be put through depends first upon the Commission in authorizing them and next upon the carriers in putting them into effect.

The work of bringing about actual consolidations of railway companies has been tedious. Though twelve years have passed and many millions of dollars have been expended, practically nothing has really been accomplished. At best, the procedure necessary to bring about actual consolidations is cumbersome. Only a general plan has been promulgated. Before that plan can be put into effect, it will be necessary to have hearings for states and communities that will require several years. To put them through after they are authorized will require enormous amounts of money which cannot be raised under present conditions. After carriers have made all the consolidations which the law permits, competition will remain, intensified by the greater strength of the consolidated systems. Under paragraph 1 of Section 5 arrangements for the division of traffic, completely dealing with the subject of competition, can be made almost over night.

THE FIRST SECTION of New York City's new municipally-owned subway system, extending from Chambers street, Manhattan, to 207th street, was opened for traffic on Saturday, September 10.

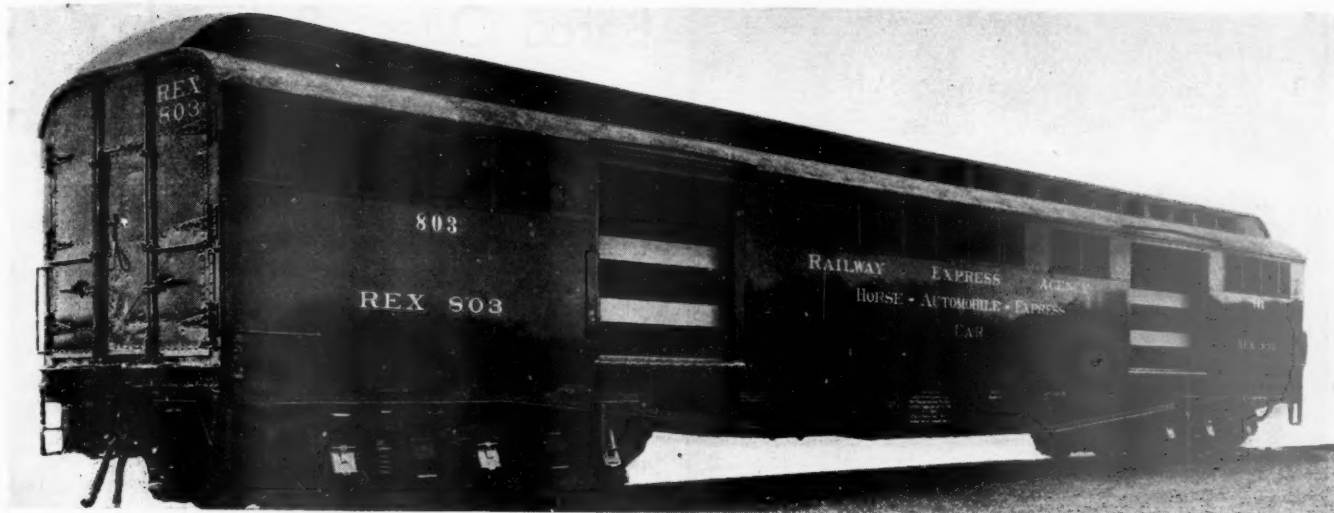
\* \* \*



*Courtesy Swiss Federal Railroads*

The Platforms of the Swiss Federal Railroad Station at Basle Provide Ample Room for Passengers





One of the Converted Horse-Automobile-Express Cars

## Railway Express Agency End-Door Cars Are Modernized

Six automobile-baggage cars are thoroughly overhauled and converted into express rail equipment of wider utility

SIX old 70-ft. end-door automobile-baggage cars owned by the Railway Express Agency, Inc., and known as the 800-Series, have recently been completely overhauled and converted into express rail equipment of the latest type. A high degree of utilization is expected to be obtained from the rebuilt cars for, in addition to their normal use for the rail movement of express shipments, they are especially adapted for the handling of commercial horses, automobiles and almost any large or unusual traffic.

The old cars, in their worn condition, were idle much of the time and, owing to the surplus of railroad bag-

gage cars, there was little chance of the 70-ft. 800-Class cars being used for the shipment of ordinary baggage. Moreover, it was frequently necessary for the Railway Express Agency to rent horse cars from private car companies. The conversion of the old cars into modern horse-automobile-express cars is expected to relieve the necessity of hiring additional equipment and, at the same time, to provide an improved service.

Relatively little work was required on the trucks and underframes of the old cars to condition them for further service. The car bodies were given additional rigidity by the installation of a series of four 3½-in. by 3½-in. steel angle braces, spaced at intervals throughout the length of the car, and serving not only to stiffen the car structure but to form rigid points of attachment for the swinging cross gates. An ingenious arrangement of one-piece sheet-metal guard is applied over each of these angle braces in the upper part of the car, as shown in the two interior illustrations. This is necessary from the point of view of appearance as well as to prevent possible injury to animals. The side walls of the car have galvanized sheets applied below the windows. Adequate floor drains are installed and located so as to clear the underframe and trucks.

A ventilated door is provided in one end of the car by means of two small sliding doors, one of solid-panel construction and the other utilizing a panel construction which permits ventilation. The side doors in the converted car are of the sliding type, hung with three roller-bearing hangers at each door to permit easy one-hand operation. The steel shutter at each window can be raised or lowered, a chain holder making it possible partly to close this shutter, which is readily operated by means of a steel lift, welded in place.

Each car is equipped with cross gates, so constructed



Cross Gates Ready to be Swung Into Position to Receive Commercial Horses and Fancy Cattle or Livestock Generally





An Inside View, Showing End-Door Equipment, Cross Gates, Bull Bars and Ventilating Facilities

that the sagging commonly encountered is eliminated by the use of an adjustable turnbuckle device. This assures engagement of the cast-steel fittings that form the hinges and locking devices. Since the combined hinge and locking devices are identical on each side of the car, the gates may be swung either way, whichever is more convenient. The gates can also be operated as swinging bulkheads for storing express shipments, when necessary. Storage of the bull boards is provided within sheet-iron channels secured to the inside face of the pockets for the side sliding doors. Two bull boards at the automobile-door end of the car are stored along the side wall under the side windows. If the bull boards are secured only by chains, they are a source of potential damage to express shipments, or possibly the boards may be lost.

The converted car now has all the latest mechanical features of the special type developed for handling commercial horses. In fact, it has more than the ordinary area of ventilation in the side windows and the ventilating end door which may be used when wanted. The provision of the three cross gates permits four separations of the animal shipments. One separation in one end of the car is intended for a single animal, while the other three compartments hold 8 or 10 animals each, according to size. The separation gates are 6 ft. high and are substantially made.

While the converted horse-automobile-express cars are not intended for the handling of race horses, requiring individual stalls, they are usable for that purpose when three or four such animals are moved. However, the principal lading they are intended to handle is prize or fancy cattle and exhibition horses; in fact, commercial horses of any kind. Because of the excellent ventilation, the cars also are said to be ideal for shipping cucumbers and vegetables of all kinds where no ice is required and plenty of good ventilation is necessary. The automobile end-door feature has been retained so that a shipper may load automobiles in one end as heretofore. The cars can also be used for the transportation of large machinery, scenery, etc., requiring large end doors for loading. They are also adaptable for through-car loading of express.

## Barco Offers Refined Steam-Heat Connections

**T**HE Barco Manufacturing Company, Chicago, has just completed modifications in the design of a flanged 2-in. car steam-heat connection, different from any supplied by the company in the past.

The pipe connection comes down straight from the end valve of the steam-heat line, with only one 90-deg. bend, giving the least possible obstruction to the steam passage. The connections are so designed that it is easy to replace a gasket or make repairs under the car, but, if the connections are gone over and put in shape once a year, it is said to be unnecessary to make repairs underneath the car or between these periods.

There are only two metal wearing parts in the new Barco metallic connections and these are made of hardened alloy steel. There are only two non-metallic wearing parts or gaskets. Friction and wear are minimized by the elimination of metal-to-metal contact of wearing parts. The threaded end of the connection that goes into the end valve is a steel forging, providing the strongest construction at the point where the greatest leverage occurs. The upper cap is provided with four lugs, to which the steel spring support may be bolted, giving four points of selection in screwing the connection into the end valve, thus insuring that the connection may be screwed until it is tight and still have one of the lugs pointing in the proper direction.

Only two joints are used and these are bolted together and to the horizontal tube with rolled-steel split flanges. The spring support is provided with a safety link, protecting against possible spring failure, and the safety spring-end links are a special design, so that they can be connected and disconnected without any bending or the use of tools.



Cross Section of Barco Two-Inch Flanged, Steam-Heat Connection

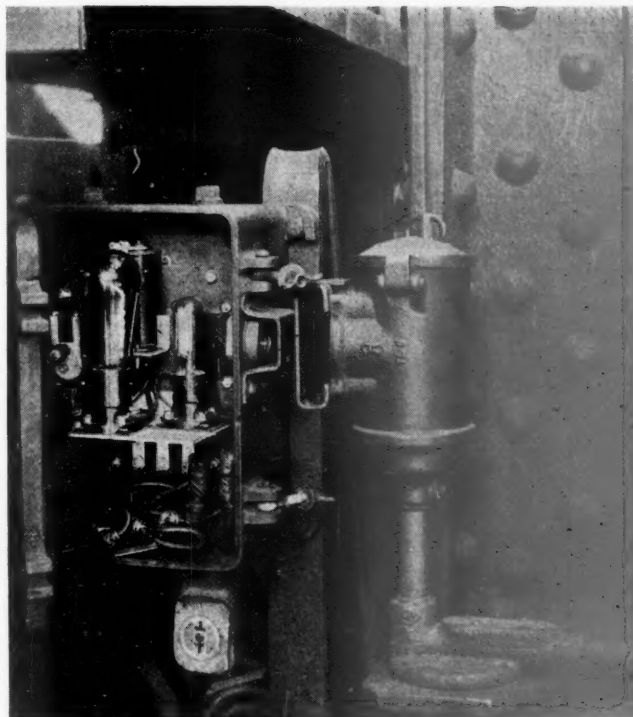
A new feature of this connection is that the insulation is applied to the vertical and horizontal tubes, after which it is encased in steel shells, which, in turn, are welded on to the connection, making the insulation and insulation shells a permanent part of the installation, as they do not have to be taken off to make repairs.

## Electric Eye Aligns Movable Bridge Span

**A** MEANS of accurately aligning the moving span of a bridge by means of a photo-electric cell has been devised by George T. Johnson, assistant electrical engineer, New York, New Haven & Hartford. The bridge to which the application has been made is a four-track structure with a swinging span which can be operated through an arc of 180 degrees, 90 degrees on each side of the tracks. It spans the Norwalk river at South Norwalk, Conn.

After the bridge has been opened, it is swung back into position and locked by driving heavy wedges on the swinging span into pockets on the shore or fixed portion of the bridge. The wedges are forced into place by the operation of an electric motor.

All of the bridge controls are operated from a control house on one of the fixed ends of the bridge immediately adjacent to one end of the swinging span. In the past, the necessary alinement has been made by markers located respectively on the swinging and fixed parts of the bridge which can be seen from the window of the control house. The photo-electric cell makes much more



The Light Source in the Cylindrical Housing Is on the Moving Part of the Bridge. The Photo-electric Cell and Amplifier Shown with the Cover of the Box Open Is on the Shore End

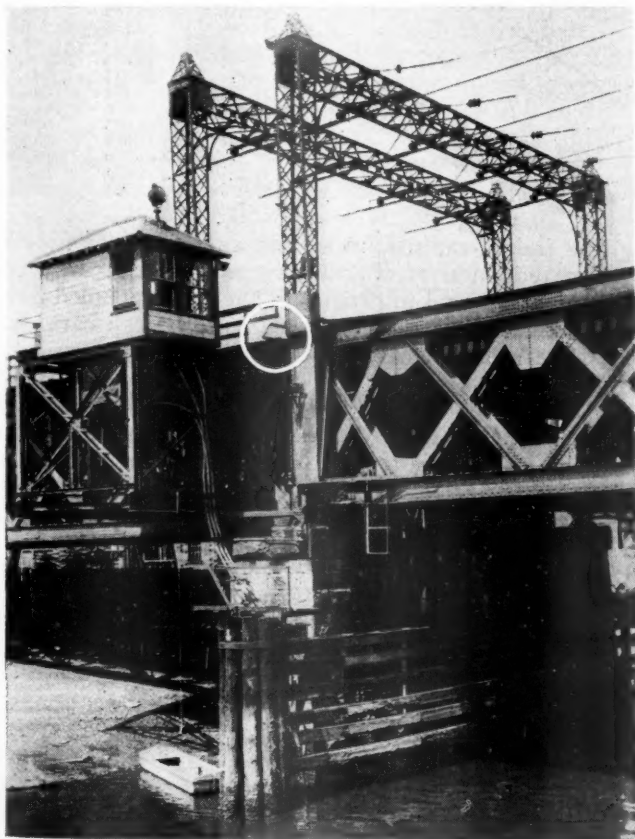
accurate alinement possible and carries the indication into the control house.

As shown in one of the illustrations, the light source for operating the cell is located in a cylindrical housing mounted on the moving span about 15 ft. below the tracks. Light is emitted through a vertical slot 1/8 in. wide and when the bridge is in proper alinement, the narrow beam of light shines through a corresponding 1/8 in. slot in the receiving apparatus mounted on the fixed portion of the bridge onto the sensitive plate of the photo-electric tube. This causes a small current to flow in the tube, which current is amplified by a three-element tube such as used in radio receivers. The amplified current operates a mechanical relay which lights a lamp in the control house. As long as this lamp is burning the operator knows that the bridge is accurately alined.

No power is required for the operation of the photo-electric equipment except when it is being used for alining the bridge. The apparatus is completely weather-proof and during the course of its application was developed to a point which would allow the lamp to be burned at a low intensity, sufficient to provide 3000-hours burning. This should mean practically indefinite life, as the bridge is operated infrequently.

If desired, the bridge controls can be interlocked with the photo-electric cell circuit so that the wedges cannot be driven unless the bridge is in alinement. The installation, with or without the interlocking feature, also makes possible the operation of the bridge from a nearby signal tower, thus avoiding the necessity of having a bridge tender constantly on duty for the infrequent operation of the bridge.

Plans have been made for driving the wedges by Thrusters instead of the present geared drive from a single motor. The Thrusters consist of a cylinder and piston operated by oil pressure obtained from a small motor-driven centrifugal pump. They provide a smooth and limited thrust.



Control House at One End of the Bridge—Markers Formerly Used for Alining the Bridge Are Shown in the Circle



## Facing-Point Lock for Spring Switch

**I**N the past some railroads have hesitated to install spring switches on high-speed main lines, or, if so used, have enforced speed restrictions over such switches on account of the fact that no means was provided for locking the switch in the closed position for main-line movements. To overcome this objection, a motor-driven electric locking arrangement controlled by track circuits was developed some months ago and installed on two roads. More recently, a new and entirely different facing-point lock arrangement, operated automatically by the movement of the switch points by a train trailing through the switch, has been developed by the Union Switch & Signal Company, and is termed the Style S-1 mechanical facing-point lock for spring switches. With this equipment used in connection with a spring switch, the switch points are locked the same as for an interlocked switch for all main line trains.

The switch is equipped with the ordinary type of spring head rod and oil buffer. The switch and lock mechanism is an adaptation of the Union T-10 switch and lock movement, being very similar in construction and operation so far as the manual operation of the switch is concerned, the new and novel feature of the new S-1 mechanism being that the lock plunger can be pulled out of the notch in the lock rod by a connection extending to a switch rod located about half way between the heel of the switch and the point. This operation depends on the fact that the midsection of a spring switch which is being trailed through is bent from  $\frac{1}{2}$  in. to 1 in. before sufficient force is exerted at the point of the switch to overcome the effort of the spring in the spring head rod which is tending to hold the point closed. After the plunger is withdrawn, the points are free to move over, permitting the switch to be trailed through, the oil buffer preventing the return of the points in the interval between the passing of succeeding trucks. After the train has passed, the spring action closes the points and when they are in proper alinement the plunger snaps back under spring pressure into the notch in the lock rod, thus locking the switch in place for all main line movements.

The mechanism is equipped with a circuit controller and point detector, through the contacts of which are extended the circuits for controlling the signals govern-

ing train movements over the switch. If the position of the switch points is such that a facing point movement is not permissible with safety, or if the mechanism is not in proper adjustment to unlock the points for a trailing movement, the signals governing train movements will indicate stop.

## Freight Car Loading

WASHINGTON, D. C.

**R**EVENUE freight car loading continued to increase in the week ended September 24, amounting to 595,746 cars, or 8,444 more than the total for the preceding week. This was a decrease of 142,290 cars or a little over 19 per cent as compared with the corresponding week of last year and of 254,917 cars as compared with 1930. Increases as compared with the week before were reported as to all commodity classifications except ore and miscellaneous, most of the increase being attributable to the coal loading. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

### Revenue Freight Car Loading

Districts	Week Ended Saturday, September 24, 1932		
	1932	1931	1930
Eastern	131,644	159,789	204,151
Allegheny	107,641	146,719	184,606
Poconong	41,421	48,199	57,004
Southern	88,134	104,207	130,936
Northwestern	75,281	100,286	144,085
Central Western	96,744	115,517	148,295
Southwestern	54,881	63,319	81,586
Total Western Districts	226,906	279,122	373,966
Total All Roads	595,746	738,036	950,663
Commodities			
Grain and Grain Products	36,060	36,978	43,070
Live Stock	23,044	25,191	29,068
Coal	113,140	128,715	153,159
Coke	3,700	4,715	7,951
Forest Products	18,606	25,525	42,159
Ore	5,598	25,806	48,095
Merchandise L. C. L.	179,054	216,811	244,759
Miscellaneous	216,544	274,295	382,402
September 24	595,746	738,036	950,663
September 17	587,302	742,614	952,561
September 10	501,824	667,750	965,813
September 3	559,727	759,871	856,649
August 27	537,973	763,551	984,510

Cumulative total, 38 weeks.....20,354,683 27,943,995 34,377,946

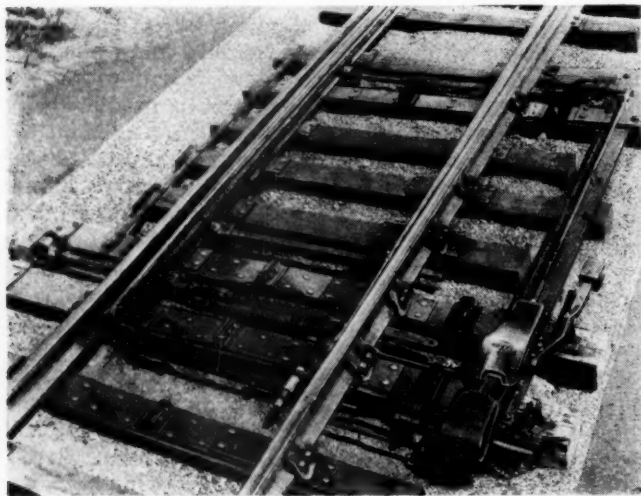
The freight car surplus on September 14 was 654,851 cars, a reduction of 53,180 cars as compared with the number at the end of August. The total included 344,668 box cars, 241,701 coal cars, 26,789 stock cars, and 14,204 refrigerator cars.

### Car Loading in Canada

Instead of showing the usual seasonal increase, car loadings in Canada for the week ended September 24 decreased to 51,915 cars from 55,523 cars for the previous week and the index number dropped from 78.54 to 68.94.

Grain loading in the western division showed a decline of 4,264 cars. Miscellaneous freight also decreased by 227 cars, but coal increased by 680 cars and other commodities showed smaller changes. Merchandise loading increased from 13,637 cars for the previous week to 13,891 cars and the index number rose from 76.65 to 79.10.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada		
September 24, 1932	51,915	19,007
September 17, 1932	55,523	17,954
September 10, 1932	44,278	15,832
September 19, 1931	54,085	22,232
Cumulative Totals for Canada		
September 24, 1932	1,573,344	723,758
September 19, 1931	1,838,000	978,218
September 20, 1930	2,307,394	1,275,500



The Oil Buffer is at the Left and the Lock at the Right



# Annual Meeting A.R.A. Safety Section

First joint meeting since merger with section  
of National Safety Council

WASHINGTON, D. C.

THE twelfth annual meeting of the Safety Section of the American Railway Association, which has been merged with the Steam Railroad Section of the National Safety Council, was held at the Hotel Washington, Washington, D. C., on October 4-6 in conjunction with the Annual Safety Congress of the Council, held October 3-7.

The meeting was opened with a report of the Committee on Relations With Steam Railroad Section by Robert Scott, chairman, who is director of insurance and safety of the Atlantic Coast Line, followed by a ceremony symbolizing the "joining of hands" of the two organizations, and on opening address by C. T. Bailey, chairman of the Safety Section. Mr. Bailey said that the consolidation had brought about a stronger and more effective organization of railway safety workers than had heretofore existed and it will not only broaden the activities of the section in its relation to the public but will afford the facilities of technical advice now available through agencies of the National Safety Council to the members of the Safety Section.

"Gratifying progress," he said, "has been made by all Class I railroads in the campaign of reducing the frequency of casualties on American railroads. In fact, the frequency of reportable injuries for employees on duty per million man-hours in 1931 was 19.64 per cent less than in 1930 and the same proportionate decrease is apparent for the first six months in 1932. In 1923 there occurred 30.89 per cent personal injuries to employees on duty per million man-hours work. In 1931, this was reduced to 7.51 per cent, or a reduction of more than 75 per cent. These accomplishments in reduction of personal injuries are the direct result of the intensive safety campaign which the railroads have conducted."

## President Aishton Speaks

R. H. Aishton, president of the American Railway Association, gave an informal address pointing out that safety and service are the two principal requirements asked of the railways today by the public and that results show that the carriers are more than meeting them. On behalf of the railway executives he extended hearty congratulations on the work accomplished by the section and its plans for the future and he predicted that better times are ahead so that the safety drive can be continued with even greater vigor.

"The railroads," he continued, "have an obligation to furnish the public with adequate, safe and continuous service. But even were that not the case, they unquestionably would continue to do so, for the crucible of time has proven that good railroading is safe railroading. The fact the railroads have been able to establish remarkable safety records in recent years is not an accident but has resulted from an intensive effort on their part to meet the desires of the public for that kind of service. In 1931, only four passengers were killed in train accidents compared with seven in 1930

and 76 in 1920. For each fatality in train accidents in 1931, the railroads carried more than 150,000,000 persons.

"Few, if any, of the industries of this country have a better organized safety effort and centralized control of safety matters than the great railway companies of this country. This safety effort extends not only to the public and to the employees, but also down into the shops and laboratories of the railroads where grueling tests and expensive research work are continuously being conducted in order to bring about further improvements in the making of wheels, rails, means of communication, locomotive and car construction and in scores of other things with a view of promoting still greater safety on the railroads of this country.

"Before any changes, however, are made in the running time of trains, specifications for railway equipment, methods of constructing tracks and bridges, or any operating methods, the supreme test, which is that of safety both to passengers and employees, is thoroughly applied. The term 'Safety First' may have ceased to attract public attention to the extent it did at first, but to the railroad man it has come to be sort of a religion."

## Careful Investigation of Causes Important

W. P. Borland, director of the Bureau of Safety of the Interstate Commerce Commission, told the meeting that there is no sound excuse for the occurrence of accidents, which are a costly economic waste, and that an important remedy consists in thorough investigation of the underlying causes to be removed.

"Formerly," he continued, "many accidents on railroads were investigated for the principal purpose of ascertaining the immediate cause, then determining what disciplinary action should be taken and, to what extent it should be carried. There the matter rested. Today we are paying increasing attention to the more important side of the question, which is the development of underlying causes with a view of profiting by the unfortunate experiences of the past. This is a long step in the right direction but a more widespread application of this policy when it comes to an investigation of all other accidents, whether on the railroads or highway, would undoubtedly materially reduce the economic waste that comes from accidents today.

"The attitude people have toward accidents is very apt to be determined by the attitude of those charged with the enforcement of rules, laws and regulations intended to provide for the safe movement of traffic. I do not know of any better example of this than can be found in the attitude of the general public toward automobile accidents. Such accidents seem to be considered by the public as things which will happen and if the parties involved are willing to settle the matter among themselves, it is doubtful whether, in the majority of cases, anything is done about it with a view of determining the cause or the cure. The result is that the gen-

eral public seems to have an apathetic attitude towards automobile accidents that would not be tolerated on the ordinary railroads with respect to rail accidents.

"For all practical purposes, there is no such thing as an unavoidable accident. Particularly is this true as to a collision between two automobiles or between two trains for some one is at fault. It may be argued that no one has time to dignify minor accidents by careful and painstaking investigation, but the answer to any such argument is that if such accidents are investigated carefully and with sufficient thoroughness to bring out the underlying condition or situation which may exist, the time soon will come when there will not be very many to investigate. Furthermore, you can rest assured that the occurrence of major accidents will decrease just as rapidly as do the minor accidents."

#### Casualties to Employees

Thomas H. Carrow, superintendent of safety of the Pennsylvania, in presenting the report of the Committee on Statistics, pointed out that the record of casualties to employees on duty in 1931 of 621 killed and 21,417 injured, represents a casualty rate of 7.5 per million man-hours and an improvement of 75 per cent since 1923. He said that on the basis of the improvement already shown he expected to see this reduced to less than 4 by the end of 1939, because the machinery will be set in motion that will eventuate in that result. He called attention to the wide variation in the rates on different railroads to show the opportunity that exists on the roads whose figures are above the average. Mr. Carrow also discussed the showing made in various classes of accidents and the remarkable improvement made as to many of them, and in each case pointed out the remedies which should be adopted to bring about further improvement. "Practically all accidents are preventable," he said, "and while the railways have already been able to make a phenomenal reduction in accidents of all kinds, there is no question but that still further reductions are possible." As one example he said that while mistakes in issuing train orders cost 15 lives in 1923 not a single trainman lost his life in 1931 as the result of negligence in issuing train orders, of which there were millions.

#### Trespassing Increasing

H. L. Denton, general superintendent of police of the Baltimore & Ohio, read a paper on "The Railroad Trespass Evil." He said that during the past two years there has been a very large increase in the number of adult trespassers, due to general business conditions, many good citizens going from one community to another seeking employment. Due to the inadequacy of laws covering trespassing in many communities, railroads are in a position where they can do little other than eject trespassers from the property. He felt that a great deal of good work can be accomplished if employees could be educated to understand that in the interest of safety it is as much their job to warn the trespasser as it is that of the police officer. Very little result has been obtained in reducing accidents to trespassers in the past ten years. In 1921 the number killed was 2,481 and 3,071 were injured, and in 1931 there were 2,401 killed and 3,321 injured. In the last year and a half the police departments of 90 railroads made 213,353 arrests, a large portion of which were for trespassing.

In the past ten years the railroads have made an improvement of 75 per cent in the safety of train operation, said George H. Warfel, assistant to vice-president of the Union Pacific, in presenting the report of the

Committee on Train Accidents. This achievement culminated in an unprecedented safety record being made by the railroads in 1931, and preliminary reports for the first six months this year show a still greater improvement compared with the same period one year ago, he said.

"In 1931 only four passengers lost their lives in train accidents, three of whom were killed in one accident. This was the smallest number of fatalities to passengers ever reported for any year by the railroads, and was a reduction of three under 1930. A still better safety record, however, is indicated for the present year as reports for the first six months in 1932 show that no passenger lost his life in the first half of the year in any train accident and the number of fatalities among trainmen was also below the corresponding period last year.

"The Safety Section of the American Railway Association in 1930 set a goal calling for a reduction of 33 per cent in the number of accidents by the end of 1933 as compared with the 1930 performance. That goal, so far as train accidents are concerned, was almost achieved in one year. The Safety Section in 1924 established a goal calling for a 35 per cent reduction in accidents by the end of 1930. This goal had practically been doubled when the time limit was reached.

"This achievement of the railroads in promoting safety on their lines can be attributed to the aggressive and intensive safety campaign which they have conducted, not only among their own employees but also with the public, careful inspection and maintenance of both rolling stock and tracks, strict enforcement of rules, and increased investments in automatic signals, interlocking plants, and centralized regulation of train operation."

#### Highway Crossing Accidents

The railroads, with widespread public cooperation, have for the third consecutive year been able to bring about a reduction in the number of casualties resulting from accidents at railroad highway grade crossings, according to the report submitted by H. A. Rowe, chairman of the committee on Prevention of Highway Crossing Accidents, and manager of the claims department of the Delaware, Lackawanna & Western. "We believe," said Mr. Rowe, "that through the intensive efforts of the railroads and the cooperation of the public that distinct progress has been made in stemming the upward tide in crashes at railroad highway grade crossings. The number of fatalities resulting from such accidents is still too great, however, especially when you consider that about 25 per cent of those accidents result from motorists crashing into the sides of trains. Fatalities resulting from accidents at railroad highway grade crossings totaled 1,811 in 1931," the report said, "which was an increase of one compared with the number killed in 1922, in which year the Careful Crossing Campaign of the railroads was inaugurated. This outstanding accomplishment in crossing accidents reduction can better be grasped when we note that motor vehicle fatalities on streets and highways in 1922 were 13,676 but in 1931 there was an increase of 18,913 deaths or 139 per cent. While the number of motor vehicles registered in the United States in 1931 was 2.8 per cent below the previous year, gasoline consumption increased 13 per cent."

Mr. Rowe said that under the direction of his committee, 66 railroads in 47 states made an eight-hour survey at 302 crossings on May 18, 1932, in order to determine the character of the traffic over such crossings, both train and vehicular, and the care exercised by vehicle drivers in passing over those crossings.



While the survey was in progress 4,394 trains and 330,434 motor vehicles passed over the crossings. Of the drivers then under observation, 75 per cent exercised reasonable care; 13 per cent were classed as definitely reckless and 12 per cent were on the border line between care and lack of care. Seventy instances were noted in which motor car drivers had particularly narrow escapes from injury. There were 143 instances where the drivers of school buses failed to bring their buses to a stop prior to passing over crossings.

The committee has called to the attention of the commissioner of education of each state the hazards to school children transported by bus, and recommended that in such states where the matter is not already covered by statutory obligation, the commissioner of Education establish rules and regulations requiring such buses to come to a stop at not less than 10 feet nor more than 50 feet from each railroad crossing and only proceed when the way is known to be clear.

"Very gratifying results," the report continued, "have been attained by acknowledgements from 27 states that there is a statutory law or a positive rule of the department of education requiring such stop. Eight states which do not have such an arbitrary rule have now assured the committee of its adoption. Negotiations are still pending with the other states for their inclusion of the rule in bus transportation contracts."

#### Other Reports

The Committee on Education, L. G. Bentley, general safety agent, Chesapeake & Ohio, chairman, deplored the apparent necessity prompting a number of railways to discontinue or radically reduce their orders for posters and circulars, saying that "this decline has been so radical as to suggest the advisability of temporarily curtailing the number of productions."

The Committee on Train Service Accidents, D. G. Phillips, superintendent safety, Wabash, chairman, submitted a report taking up in detail the ten sub-heads under train service accidents in the I.C.C. statistics and analyzing the causes and suggested remedies.

Reports were also submitted by the Committee on Non-Train Accidents, D. A. Klumph, supervisor of safety, Pere Marquette, chairman and the Committee on Contact With Bureau of Statistics, Interstate Commerce Commission, D. H. Beatty, superintendent safety and sanitation, Southern, chairman. Dr. M. O. Lorenz, director of the Bureau of Statistics, Interstate Commerce Commission, discussed the matter of reporting accident statistics, pointing out that some questions as to the detailed accuracy of such statistics have been raised because of the varying interpretations placed by reporting officers on the rules for reporting injuries. The same subject was also discussed by G. H. Warfel in connection with the report of the Committee on Train Accidents, suggesting that where all the reporting of accidents for a carrier is centralized in one bureau, required to collect complete and accurate data pertaining to an accident immediately after its occurrence, the interpretation of and adherence to the reporting rules will be most thorough. The committee also recommended that the persons on each road who actually decide the reportability of accidents or have direct personal charge of rendering reports to the commission should attend all the annual and regional meetings of the Safety Section.

W. N. Doak, Secretary of Labor, addressed the convention briefly, congratulating the railways on their success in the improvement of the safety record and in protecting railway employees and the public. Other addresses were: "The Green Book," by Lew R. Palmer, conservation engineer, Equitable Life Insurance So-

ciety; "Unsafe vs. Safe Switching Practices," by P. F. Neff, inspector of safety, Pennsylvania; "The Economic and Other Values of Safety," by O. H. Page, general superintendent, Atlantic Coast Line; "Building Safety Morale in the Shops," by G. H. Miller, assistant manager, safety and fire protection, E. I. DuPont De Nemours & Co.; "Safety and Its Application to the Individual," by D. F. Stevens, general superintendent of transportation, Baltimore & Ohio.

#### Election of Officers

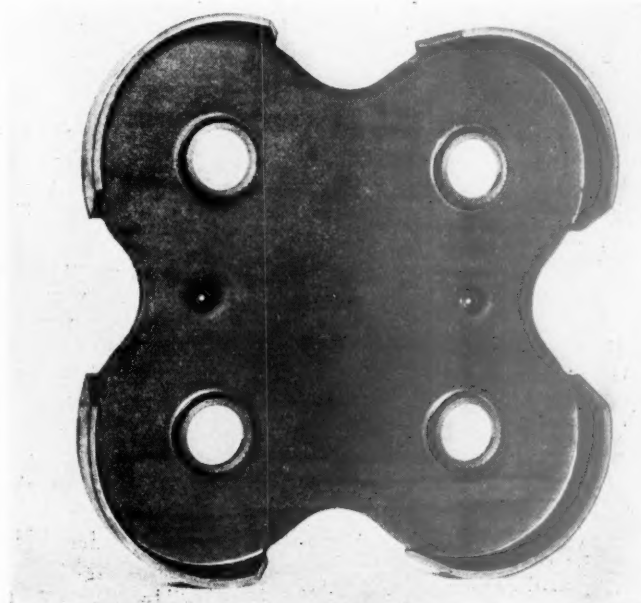
Officers elected for the ensuing year by the Safety Section, A.R.A., are as follows: Chairman, Chas. E. Hill, General Safety Agent, New York Central Lines; First Vice-Chairman, C. L. LaFontaine, General Safety Supervisor, Great Northern; Second Vice-Chairman, H. A. Parish, Assistant to General Manager, Chicago & North Western; Secretary, J. C. Caviston.

## Spring Plate Requires No Belt

A NEW MW-type railroad spring plate has recently been developed and placed on the market by the Motor Wheel Corporation, Lansing, Mich., for use on 30-, 40- and 50-ton freight cars with 4-coil spring grouping ensembles.

This spring plate, made of  $\frac{3}{8}$ -in. copper-bearing or A.R.A. specification steel, is sheared, punched and flanged to the shape shown in the illustration. Flanges  $\frac{1}{2}$  in. high around each of the small spring-center holes, in conjunction with 120-deg. flanges  $1\frac{1}{2}$  in. high at each corner of the plate, serve to center each spring and keep it in the proper place. The open portions at the sides contribute to ready drainage and thus further tend to minimize corrosion. The curved flange construction, together with the use of comparatively heavy material in the plates, is said to give them a service life approximately three times as long as the ordinary spring plate.

The principal advantage of the MW-type spring plate is the elimination of the center bolt, required with



MW-Type Spring Plate for Use on 50-Ton Cars

standard A.R.A. spring plates, due to the fact that the curved flanges, while permitting free movement of the springs, is designed to prevent any possibility of spring loss. A.R.A. standard dimensions are adhered to in all details of the spring plate, with a view to adapting it to use with all A.R.A.-type springs and all types of spring planks.

The Motor Wheel Corporation, which has previously manufactured standard spring plates is offering the new MW-type plate with a view to eliminating spring loss at modern high freight-train operating speeds and at the same time providing a spring plate with greatly-increased service life.

## Accident Record for 1931

THE report of the Interstate Commerce Commission on the accident record of the railroads of the country for 1931, as given in advance sheets, was noticed in the *Railway Age* of April 9, last, page 607. That account showed the remarkable record of only four passengers killed in train accidents in the 12 months, as well as material decreases in nearly all other items. The full report, Accident bulletin No. 100, has just been issued (October 3). This pamphlet of 100 large pages contains the usual tables, classifying causes of accidents in great detail. Of the persons reported injured, in train and train service accidents, in the report as published in April, 397 subsequently died, as follows:

Passengers reported killed 40, add subsequently died, 5 (all five injured in train service accidents, none under "train accidents"). Employees killed, 514; add subsequently died, 68, including four not on duty. Other persons, non-trespassers, killed, 1,970, add subsequently died, 148; trespassers killed, 2,334; add subsequently died, 169.

### Improvement Over Ten-Year Period

The first six pages of the bulletin are filled with charts showing in graphic form the gradual improvement in safety over a period of ten years, though it is noted that in fatalities to trespassers there was an increase down to 1927. Since that time there has been some falling off, yet 1931 shows a larger total than 1921.

Among the more notable items in these charts is the record of fatalities to freight trainmen, which in 1920 averaged 3.7 for each one thousand men in service, while in 1931 this average was 1.3. Because of reduced traffic, and other causes, collisions of trains in 1931 totaled only one-third of the record of 1923.

The introduction to this part of the bulletin says:

"The second year of the industrial depression shows another large reduction in the fatalities to employees both absolutely and in relation to the number of persons employed. The number of employees killed per 1,000 employed was 17.19 per cent less in 1931 than in 1930, and per million man-hours the decline was 16 per cent.

"Taken absolutely, that is, without relation to the number of employees exposed to accidents each year, the decline in employee fatalities in 1931 under 1930 was 30.6 per cent. For the same period, freight ton-miles declined 19.41 per cent and the passenger-miles 18.36 per cent. In other words, not only did the number of employees killed diminish because fewer em-

ployees were at work, but those remaining at work were less liable to accidental death in 1931 than were those at work in 1930. To what extent this was the result of safety measures and to what extent to other causes can not be determined."

The total damage to railway property in train accidents in 1931 was \$9,607,085. The table shows:

	Number	Amount
Collisions .....	1,913	\$2,093,558
Derailments .....	4,554	6,554,135
Locomotive-Boiler Accidents .....	15	85,897
Other Locomotive Accidents .....	633	342,373
Miscellaneous .....	937	531,122
Total .....		\$9,607,085

Under the head of collisions, more than one-third of the money loss and nearly one-third of the total number of persons killed come under the sub head, switching.

Showing the sharp falling off in business as well as improved safety in train operating methods, it is stated that the cost of clearing wrecks and of payments for bodily injuries for four years have been reduced as follows:

Year	Cost of clearing wrecks	Accruals for injuries to persons
1928 .....	\$6,476,538	\$41,031,791
1929 .....	6,389,986	41,828,966
1930 .....	4,371,570	36,743,105
1931 .....	2,885,015	29,314,297

The regular appendices are given showing condensed records of totals back to the year ending June 30, 1888. These tables show the average number of trainmen in service each year, 1922 to 1931 inclusive. Cost of collisions (damage to railway property) is given for each year, 1913 to 1931 inclusive.

## Storage Battery for Air-Conditioned Cars

TO meet the demand for a suitable battery for the air-conditioning of passenger cars, the Electric Storage Battery Company, Philadelphia, Pa., has designed a new Exide Ironclad element with three factors in mind, namely; high capacity within the space provided by the A.R.A. standard passenger car battery boxes, limitation of weight in proportion to the ampere-hour capacity, and the unusually severe operating conditions.

The new battery, known as type EPTT, has been designed in three capacities, 600, 800 and 1,000 ampere-hours at the 8-hour rate, the chief demand being for the battery of the highest capacity.

CO-ORDINATION OF RAIL AND MOTOR TRANSPORTATION in Switzerland is being investigated by the Swiss Association of Motor Truck Owners, the Swiss Automobile & Cycle Syndicate and the Swiss Federal Railways, according to a report reaching the Department of Commerce from Berne. The Swiss Express Company (SESA), which has had a working agreement with the Federal railway system since 1926 to collect and deliver freight at strategic points, increased the number of its agencies during 1931 from 210 to 237, the number of stations served from 294 to 365, and the number of villages served from 607 to 916. This company, which is desirous of monopolizing motor transportation in Switzerland by eliminating all private enterprises, proposes also to relieve the railways of short-distance transportation—20 miles and less. A loss of \$1,944,216, after interest and sinking-fund requirements, was reported by the Swiss Federal Railways for 1931.



# Odds and Ends . . .

## 72-Year Veteran Retires

The Chesapeake & Ohio added to its retired list the other day a veteran of 72 years of service. It is Chesapeake & Ohio car E 13, which was built in 1860 and then became a proud unit of a fine passenger train. Later the car had a varied career, ending its days in service by transporting employees to and from work between the Huntington, W. Va., station and the Chesapeake & Ohio shops.

## Daily Publicity for the Katy

The Missouri-Kansas-Texas gets publicity every day, and without much trouble either, in the Coffeyville Journal, published at Coffeyville, Kan. Each morning at 10 o'clock a reporter for the newspaper calls at the Katy station to obtain the temperature readings on the railroad thermometer and also to get a record of temperatures on the same day for the five previous years, for publication in the daily weather chart of the newspaper. It all comes under the head of public service.

## Music with German Mystery

The "mystery excursions" operated on the Essen division of the German Railroads, which were inaugurated experimentally some time ago, have proved extremely popular and are being continued. The company is not content, however, to let the mystery element provide the only entertainment for the passengers. The railroad company also sends along its own orchestra to play dance music on the trains, and song texts are distributed to the passengers so that they can sing as they ride. On another division, passengers who can guess their destination are given prizes.

## A Section Gang to the Rescue

Thanks to a Canadian National section gang, a woman and her baby were recently enabled to continue their trip to Europe after the baby had left its mother temporarily destitute by throwing a purse with money, tickets and valuables out of an open window of the Canadian National train upon which they were passengers. A telephone call from the conductor started a successful search by the section gang along the right of way between Arden, Man., and Neepawa, 116 miles northwest of Winnipeg. The train was held while the Arden station agent raced in his car to catch up with the train and return the woman's purse.

## Milwaukee Veteran

Fifty years of continuous service as an employee of the Chicago, Milwaukee, St. Paul & Pacific was celebrated on September 15, when Martin J. Larson, special representative of the operating department, was the guest of honor at a reception tendered to him by his office associates. A 50-year service button was pinned on Mr. Larson's lapel by J. T. Gillick, vice-president in charge of operation. Mr. Larson entered the service of the Milwaukee at the age of 15 as a messenger boy in the passenger department general offices, which were then located in Milwaukee. For the past 15 years he has made his headquarters in the general offices at Chicago. He was recently honored by election to the office of secretary-treasurer of the Milwaukee Employees' Pension Association.

## L. & N. Man Wins Fishing Rodeo

L. R. James, immigration agent of the Louisville & Nashville, is the proud owner of a fine surf casting rod presented to him as a prize for landing the largest shark in the Baldwin County, Ala., fishing rodeo, held a short time ago at Burkhardt's Landing overlooking the Gulf of Mexico. Using

an 82-lb. test line, Mr. James hooked an 8-ft. 6-in. shark which proved to weigh 286 lb. After an exciting battle lasting an hour and 15 min., he subdued the monster and landed him without the aid of a gaff or harpoon. It was the largest fish caught during the rodeo. Another member of the industrial and agricultural development department was also a prize winner. He was William James, agriculture agent at Biloxi, Miss., who took a second prize for the largest bonita caught and who also was placed in the fish-liar's contest.

## Another Wanderer

The extent to which a freight car may wander about the country while away from its home rails is illustrated by an example recently taken from the records of the Southern Pacific car service department. Southern Pacific box car 31741 left its home rails on September 10, 1928, and has been wandering in foreign territory ever since. Originally consigned to a point on the Rock Island, it then took a trip down to the southern states where it spent the winter, except for a trip to Chicago during the Christmas holidays. Later on, it covered many miles over the rails of 260 roads but never had a load which would bring it home again. From the Gulf of Mexico to the Canadian border and back into the eastern states, it did its job of carrying the nation's freight until August 26 of this year when the Missouri Pacific wired to the Southern Pacific for a return routing for the car, which was promptly furnished.

## A Record for Grade Crossing Safety

An unusually high rating of safety at grade crossings, constituting a record for the Missouri Pacific Lines, if not a national record, was established during June and July. In July, 13 of the 19 operating divisions of the Missouri Pacific were without grade crossing accidents, and in June, 14 made the same record. A total of eight accidents occurred at grade crossings on six divisions in July and there were seven accidents on five divisions in the previous month. In three of the July accidents, the vehicles involved struck trains instead of being struck by trains.

The Missouri Pacific has done a good job of reducing grade crossing accidents in recent years. In 1929 there were 456 accidents at Missouri Pacific grade crossings. In 1930 this number was reduced to 408, and last year the total was 337. During the first seven months of 1932, there were 128 accidents, compared with 200 in the first seven months of 1931, 237 in the first seven months of 1930 and 212 in the first seven months of 1929.

## We Stand Corrected

NEW YORK.

TO THE EDITOR:

In your issue of August 20 commenting on the suspension of service on the Transandean Railway between Chile and Argentina, you say "at present it is the only surface link in South America between the Atlantic and Pacific oceans."

There are two railways, meter gage, which, starting at the Chilean ports of Arica and Antofagasta on the Pacific ocean, connect with the Bolivian system, which in turn connects with the Argentine government railways at Villazon-La Quiaca. These extend to Santa Fe and Rosario, where connection is made with the French lines and the Central Cordoba, giving direct connection to Buenos Aires. These lines are all meter gage so that it is possible to run a through train over them from either Arica or Antofagasta to Buenos Aires, whereas there are two breaks in the gage via the Transandean route.

With the steamer connection across Lake Titicaca also, there is virtually a "surface link" from Mollendo to Buenos Aires.

F. LAVIS.

# NEWS

## Railroads Oppose U.S. Aid for N. Y. Canals

Seven eastern lines protest against proposal now awaiting action in Congress

Seven eastern railroads on October 3 filed with the Board of Engineers, War Department, New York City, a protest against the proposal, now awaiting action in Congress, to have the United States improve, maintain and operate the Erie and Oswego canals without taking title to the waterways and their appurtenances.

The railroads point out that the proposed deepening of the channel to fourteen feet between locks and increasing the overhead bridge clearances to 20 ft., would require the reconstruction of approximately 163 fixed highway and railroad bridges and the raising of railroad tracks and other structures for varying approach distances, at an estimated cost of not less than \$50,000,000. The estimated annual maintenance and operation charge is \$2,500,000. The roads also assert that at a time when the government is assisting them to survive by making large loans of public funds, it would be unfair for Congress to support this proposal to enlarge subsidized competitive facilities that would increase their present difficulties. They also declare that efficiency under the proposed program would call for single governmental control rather than the dual state and national control that is sought.

Although the practical capacity of the barge canal has been estimated by War Department engineers at approximately 9,000,000 tons per year, the largest volume of traffic that has used the canal in any one year since it was last improved in 1918, is approximately 3,700,000 tons. Since 1903, the carriers assert, the Erie and Oswego canals have cost the State of New York more than \$146,000,000, exclusive of interest charges. The capacity of the present Erie canal is not even being approximated by the existing volume of traffic, but despite this it is proposed to enlarge this capacity, although the railroads show that each of the previous three enlargements were, successively, preludes to shrinkages in the volume of traffic using the canal. The roads cite the statement of Colonel Frederick Stuart Greene, superintendent of public works in New York State, in a report to the governor, in which he said that, in 1925, "it would have been cheaper for the state if all the freight

carried on the canal had been put in railroad cars and the state had paid the freight bills."

The roads point out that the net cost of the barge canal to the state in 1930, when 3,605,000 tons were handled on the canal, was \$10,763,574. Reduced to a ton-mile basis, the net cost to the state in 1930 amounted to 11.6 mills. When to this is added the boatmen's charge of 4.5 mills per ton-mile, the total cost per ton-mile was 16.1 mills, as against the New York Central's average revenue per freight ton-mile for 1930 of 10.1 mills. The railroad's figure embraces all classes of freight, including much that takes high rates. Most of the traffic on the canal is bulk freight which is carried at low rates by both water and rail.

The roads also call attention to the fact that the proposed huge investment would leave the railroads with additional idle capacity during the limited season of canal operation.

The railroads opposing the canal improvement are, the New York Central, Pennsylvania, Baltimore & Ohio, Erie, Delaware, Lackawanna & Western, Lehigh Valley and the Chesapeake & Ohio.

### Railroad Credit Corporation Loans

The Railroad Credit Corporation on October 1 had either actually made or authorized loans to railroads to meet their fixed interest obligations totaling \$31,681,529, according to the monthly report of that corporation filed with the Interstate Commerce Commission. Collection of rate increases under Ex Parte 103, according to the report, totaled \$35,764,606 in the first seven months this year, the increase having become effective January 4. The amount derived from the increase in July, the latest month for which reports are available, was \$4,689,460.

### Suspension of Reduced Coal Rates Vacated

The Interstate Commerce Commission on October 4 announced that it had vacated its order of September 8 in which it had suspended tariffs filed by the Pittsburgh & West Virginia reducing rates on bituminous coal from the Pittsburgh district to Cleveland, Lorain, and Huron, Ohio, to meet similar reductions in intrastate rates which the Wheeling & Lake Erie had made to the same points from points in Ohio. The W. & L. E. had made the reductions because of an order of the Ohio commission involving intrastate rates in Ohio which the trunk lines roads have asked the commission to investigate in a proceeding under Section 13 of the interstate commerce act.

## Pennsylvania Rate Rule Called Discriminatory

Examiner so finds long-and-short-haul provisions of state constitution and statutes

A finding by the Interstate Commerce Commission that the intrastate class rates in Pennsylvania required to be maintained by the long-and-short-haul provisions of the constitution and statutes of that state cause unjust discrimination against interstate commerce and that intrastate rates corresponding to the interstate class rates should be prescribed, is recommended by Examiner Howard Hosmer in a proposed report on an investigation instituted on petition of the railways. The conflict has arisen between the class rates prescribed by the Interstate Commerce Commission in official territory which became effective December 3, 1931, under an order which granted temporary fourth-section relief, and the requirements of the Pennsylvania law and constitution. For the purpose of obtaining a judicial interpretation the railways had filed tariffs, the interstate rates in which had been suspended by agreement by the I. C. C., while the intrastate rates were enjoined on a bill filed by the attorney general of Pennsylvania, in a decree which was affirmed by the supreme court of the state, three of the seven judges dissenting.

The railways took the position that the inevitable effect of the Pennsylvania law is to produce intrastate class rates lower than those which would result from the interstate basis prescribed in the Eastern case, and thereby compel the intrastate transportation of class-rate traffic at less compensation than that derived from comparable interstate hauls, as well as to cause undue prejudice to interstate shippers and points.

"Pennsylvania is an integral and important part of trunk-line territory because of its geographical position, the situation of its principal cities, and the magnitude of its industrial development," Examiner Hosmer said. "It is inconceivable that a basis of class rates applicable to its intrastate commerce differing materially from the interstate basis could be maintained without substantial hardship and inconvenience to its citizens as well as those of surrounding states, and at no time either in this proceeding or in the Eastern case has there been any contention to the contrary. Recognizing this fact, respondents undertook to establish intrastate rates determined in exactly the

(Continued on page 514)



## Net Return for Eight Months 0.93 Per Cent

Revenues drop 28.6 per cent, and expenses 26.7 per cent, compared with 1931

Class I railroads of the United States for the first eight months of 1932 had a net railway operating income of \$152,294,615, which was at the annual rate of return of 0.93 per cent on their property investment, according to reports compiled by the Bureau of Railway Economics. In the first eight months of 1931, their net railway operating income was \$353,908,889, or 2.15 per cent.

Operating revenues for the first eight months totaled \$2,091,356,725, compared with \$2,928,960,214 for the same period in 1931, or a decrease of 28.6 per cent. Operating expenses amounted to \$1,661,990,574, compared with \$2,266,164,675 for the same period one year ago, or a decrease of 26.7 per cent.

Class I railroads in the eight months paid \$197,967,471 in taxes, compared with \$219,327,549 for the same period in 1931, or a decrease of 9.7 per cent. For the month of August alone, the tax bill amounted to \$24,340,751, a decrease of \$3,219,882 under August the previous year.

Seventy Class I railroads operated at a loss in the first eight months of 1932, of which 21 were in the Eastern district, 16 in the Southern and 33 in the Western.

For the month of August alone the net railway operating income was \$28,368,388, at the annual rate of 0.97 per cent. In August, 1931, their net was \$56,444,155, or 1.92 per cent. Operating revenues for August amounted to \$252,102,172, compared with \$364,392,527 in August, 1931, a decrease of 30.8 per cent. Operating expenses in August totaled \$189,630,874 compared with \$269,362,030 in the same month in 1931, a decrease of 29.6 per cent.

Class I railroads in the Eastern district for eight months had a net of \$120,028,294, at the rate of 1.50 per cent. For the same period in 1931, their net was \$189,204,434, or 2.37 per cent. Operating revenues for the eight months totaled \$1,078,130,035, a decrease of 26.5 per cent, while operating expenses totaled \$822,151,454, a decrease of 27.3 per cent. Railroads in the Eastern district for August had a net of \$16,704,438, compared with \$26,241,377 in August, 1931.

Class I railroads in the Southern district for the first eight months had a net of \$7,330,592, at the rate of 0.34 per cent. For the same period in 1931, their net amounted to \$31,760,676, or 1.49 per cent. Operating revenues amounted to \$252,833,437, a decrease of 30.7 per cent under the same period in 1931, while operating expenses totaled \$215,821,030, a decrease of 27.4 per cent. For the month of August their net was \$843,821, compared with \$3,431,432 in August last year.

Class I railroads in the Western district for eight months had a net of \$24,935,729 at the rate of 0.40 per cent. For the same eight months in 1931, they had a net of

\$132,943,779, at the rate of 2.11 per cent. Operating revenues in the Western district for eight months amounted to \$760,393,253, a decrease of 30.7 per cent under the same period in 1931, while operating expenses totaled \$624,018,090, a decrease of 25.5 per cent. For August, the net in the Western District amounted to \$10,820,129. The net railway operating income of the same roads in August, 1931, totaled \$26,771,346.

### CLASS I RAILROADS—UNITED STATES

Month of August		Per Cent Decline
1932	1931	
Total operating revenues .....	\$252,102,172	\$364,392,527 30.8
Total operating expenses .....	189,630,874	269,362,030 29.6
Taxes .....	24,340,751	27,560,633 11.7
Net railway operating income .....	28,368,388	56,444,155 49.7
Operating ratio — per cent .....	75.22	73.92 ...
Rate of return on property investment .....	0.97%	1.92% ...
Eight months ended August 31		
Total operating revenues .....	\$2,091,356,725	\$2,928,960,214 28.6
Total operating expenses .....	1,661,990,574	2,266,164,675 26.7
Taxes .....	197,967,471	219,327,549 9.7
Net railway operating income .....	152,294,615	353,908,889 57.0
Operating ratio — per cent .....	79.47	77.37 ...
Rate of return on property investment .....	0.93%	2.15% ...

### Reduced Pullman Fares

Between New York City and Point Pleasant, N. J., southern terminus of the New York & Long Branch, over which road both the Pennsylvania and the Central of New Jersey operate, the fares for seats in Pullman cars have been reduced, for an experimental period of three months, to two-thirds the normal rate; this with the hope of inducing a larger number of passengers to enjoy the comfort of parlor cars.

### Coolidge Committee First Meeting

The organization meeting of the committee, headed by Ex-President Calvin Coolidge, to investigate the railway situation was held on October 7 in the Empire State building, New York. The session was held at the office of Ex-Governor Alfred E. Smith of New York, another member of the committee, the personnel of which also includes Bernard M. Baruch, Alexander Legge and Clark Howell.

### Low Winter Fares to Pacific Coast

Reduced fall and winter fares to the Pacific coast will be placed in effect by western railroads for the first time in history, effective November 1 to December 22, inclusive, with a final return limit of January 25, 1933. Tickets at these low rates of one fare and a quarter for the round trip will be on sale from Chicago to California, Arizona, Oregon, Washington and British Columbia daily and will permit stopovers and a choice of direct routes returning.

## Charity Donations Not Operating Expenses

N. Y. Telephone Co. contribution should have been charged to surplus, says I.C.C.

A finding that a contribution of \$75,000 made by the New York Telephone Company in 1931 to the Emergency Unemployment Relief Fund of New York City was not chargeable to operating expenses and should have been charged to the profit and loss account has been issued by Division 4 of the Interstate Commerce Commission in a proceeding instituted on the commission's own motion after the matter had been called to its attention by the Public Service Commission of New York. The latter had objected to the company's charge of such items to operating expenses and had ordered the company to revise its books by transferring from operating accounts to surplus all entries relating to donations for the years 1929, 1930, 1931, and 1932, whereas the company contended that the charge had been made in accordance with the federal commission's accounting requirements.

In view of the "possible importance of our decision as a precedent with respect to accounting for contributions made for charitable or like purposes," the commission had called the attention of the state commissions and of all carriers to the proceeding before the hearing on it last Summer, in the event that they might wish to intervene and be heard, and the Railways were represented by E. M. Thomas, comptroller of the Chesapeake & Ohio and chairman of the accounting committee of the Railway Accounting Officers' Association.

While the commission's report confined its finding to the particular item in question, and said that no order will be entered unless it develops that one is necessary, it said that "it follows from that finding and the preceding discussion that only such contributions for charitable or social or community welfare purposes are properly chargeable to operating expenses as can be shown to have a direct or intimate relation to the protection of the property of the company or the development of its business or the welfare of its employees. Respondent and other telephone companies will be expected for the future to maintain their accounts accordingly. There appears to be no pressing need for requiring an actual correction on the books of past accounting in this respect."

The commission had pointed out that the company's contributions in 1931 amounted to only .0613 per cent of its telephone operating revenues for the year and that company witnesses had contended that it makes no difference to the telephone user or to the stockholder how these items are treated in the accounts because a similar mathematical result is obtained in the surplus account in either event.

"Upon analysis," it said, "it is quite evi-

dent that the contribution in issue had only the most indirect and remote relation to the welfare of respondent and of its property, business, and employees, and only such relation as might be traced in the case of most contributions for general charitable or social welfare purposes. Nor has respondent the responsibility of an individual citizen with reference to general community welfare. It has in law the status of an artificial person, but its powers and duties are confined to those conferred or imposed upon it by its charter, and these do not include the fostering of the general welfare of the community. When respondent makes contributions for this general purpose and charges them to the expense of its telephone operations, it is in effect exacting, or attempting to exact, these contributions from the users of its telephone service. It is their right, and not the right of respondent, to decide what contributions of this character they shall make. Nor has respondent any powers of taxation. If contributions in sufficient amount are not made voluntarily and there must be resort to taxation, it is through the established agencies of government that the taxation should be imposed, and not through telephone companies or other public utilities in the guise of expense for service furnished. If the amount in question was not properly chargeable to operating expenses, there is no suggestion in the record of any alternative except the profit and loss account."

Mr. Thomas had taken the position that all donations or contributions made for charitable or like purposes should be charged to operating expenses. He asserted that prior to July 1, 1914, the effective date of our present classification of operating expenses, the practice of the carriers was to charge such items to operating expenses; that not all contributions or donations are made in cash; and that it is not unusual for railway companies to give free service or service at reduced rates. He admitted that the effect of excluding charitable donations from operating expenses would be to minimize or at least eliminate, in some instances, such expenditures by railways which the commission has in the past treated as unreasonable charges to operating expenses. The railroads with which this witness is connected have made no contributions to any unemployment relief fund and would not, he testified, make one unless there was some benefit accruing to the railroad. They have regularly made contributions to chambers of commerce, the Y. M. C. A., community chests, and like organizations, and occasionally to colleges which provide education in transportation matters. All such items have been charged to account No. 460, General Expenses.

Counsel for the Association of Community Chests and Councils had argued that a decision holding that contributions should be charged to surplus and not to operating expenses would most seriously add to the burden of difficulties with which the chests will in any event be compelled to contend; that it would furnish an excuse to wavering and hesitant executives who previously have responded to

the appeals which the chests have made; and that these directors would find themselves in doubt as to whether under such a ruling their duty to their stockholders, and their own self protection, would permit them to dispose of any of the company's funds committed to their care.

#### **R.B.A. Annual Dinner in New York on November 10**

The annual meeting and annual dinner of the Railway Business Association will be held at the Commodore hotel, New York, on November 10. Details of the program will be the subject of a later announcement.

#### **Club Meetings**

The New England Railroad Club will hold its next meeting at Hotel Statler, Boston, on Tuesday evening, October 11. D. Crombie, chief of transportation of Canadian National, will address the group on "talk in state craft".

The Central Railway Club of Buffalo (N. Y.) will hold its next meeting at the Hotel Statler, Buffalo, on Thursday evening, October 13. Lawrence Richardson, chief mechanical officer of the Boston & Maine, will present a paper on graphical analyses of mechanical operation.

#### **North Western Offers Cent-a-Mile Pullman Car Excursion**

The first cent-a-mile excursion with tickets good in parlor and sleeping cars that has been operated in the West, is announced by the Chicago & North Western for October 8. Tickets may be used in parlor or sleeping cars on payment of the regular seat or berth rate. This reduction is offered between Chicago and almost every point on the lines east of the Missouri river in the states of Illinois, Iowa, Wisconsin, Michigan, Minnesota and South Dakota, with a return limit of October 12.

#### **Further Negotiations with Labor on Wage Question**

Railway executives, meeting in New York on October 5 to consider the proposal of President Hoover that further discussion of a reduction in wages be deferred until the end of the year, decided for the present to leave the matter with the Conference Committee of Managers to negotiate further with the Railway Labor Executives' Association.

The statement which was issued after the meeting by E. J. McClees, secretary, Bureau of Information of the Eastern Railways follows:

"At the meeting this morning the Conference Committee of Managers reported to the railway presidents on the progress of wage negotiations to date. After full discussion the matter was left with the committee to negotiate further with the Railway Labor Executives' Association."

#### **Southern Pacific of Mexico**

The Southern Pacific of Mexico, which has been operated under the supervision of the Mexican government since July 20, was returned to the owners on September 26. The property was idle from

June 27, when employees walked out after the company decided to reduce wages 10 per cent, until July 24 when operations were resumed, following an order issued by President Ortiz Rubio on July 20, directing the Ministry of Communications to take over the management of the system and begin running trains. The government's action followed the failure of the Federal Board of Arbitration and Conciliation, and the workers, to reach an agreement. A committee has been named by the railroad and the labor unions to settle the disputed wage and personnel reduction points by conference, and the conference is now under way in Mexico City.

#### **Carloading Estimate More Optimistic**

Freight carloadings in the last quarter of this year will be only 10.4 per cent less than actual loadings in the same quarter of 1931, according to estimates compiled by the thirteen shippers' advisory boards. This estimate is regarded as significant because the same shippers estimated late last June that loadings in the third quarter, the months of July, August and September, would amount to 21.1 per cent under the actual loadings for the third quarter of 1931.

Of the 29 commodities covered in the present forecast, it is anticipated that only one, cotton, will show an increase. An increase of 16,500 carloads, or 15.4 per cent, is estimated for cotton. The percentages of decrease estimated for the other 28 commodities range from 0.8 per cent on sugar, syrup and molasses and 2.2 per cent on canned goods, to 50.8 per cent on ore and concentrates. This latter compares with an estimated decrease of 70 per cent in the previous quarter.

#### **Western Railway Club Program Broadened**

With a view to getting away from the "bolts and nuts" of railroading, the Western Railway Club has just announced a broadened program of general interest and helpfulness to railway officers and supply men in all departments. The schedule of subjects to be considered at the first three meetings of the 1932-1933 season is as follows: Monday evening, October 17, "The Economic Situation and Government Expenditures," by George W. Rossetter, president, Chicago Chamber of Commerce; Monday evening, November 21, "Stores Department Problems," by D. C. Curtis, chief purchasing officer, Chicago, Milwaukee, St. Paul & Pacific; Monday evening, December 12, "Ladies' Night," "Chicago World's Fair Centennial Celebration," by Rufus C. Dawes, president, "A Century of Progress." As has been the practice in former years, these meetings will be held at the Hotel Sherman, Chicago, the regular meeting at 8:00 p.m. being preceded by a "Dutch-treat" dinner at 6:30. O. E. Ward, president of the Western Railway Club and superintendent of motive power of the Chicago, Burlington & Quincy, Lines East, reports that special plans have been made in an effort to assure an unusually-large attendance and interesting discussion at all meetings. At



the opening meeting, October 17, Mr. Rossetter will be introduced by Samuel O. Dunn, editor, *Railway Age*, and the entire subject of government expenditures and taxation in relation to present railway and general business conditions will be thoroughly presented for the benefit of the members. The social evening of the year, to which the ladies are invited, is scheduled for December 12, and, following the dinner, the present status of plans for the Chicago Centennial Celebration will be presented in detail by Mr. Dawes. It is anticipated that Ralph Budd, president of the Chicago, Burlington & Quincy, will be present at the meeting and will introduce Mr. Dawes.

### I.C.C. To Investigate Proposal That Carriers' Agents Act for Shipper

The Interstate Commerce Commission has suspended until May 1, 1933, the operation of schedules as published in the Exceptions to Southern Classification, Agent E. H. Dulaney's I. C. C. No. 45. The suspended schedules propose to establish an exception to Rule 23 of the Southern Classification, so that carriers' agents may act for shippers for the purpose of competing with motor trucks. The proposed rule reads in part as follows:

Delivery of freight carried at carload ratings or rates will be made to one consignee only; carriers' agents may act as agents of shippers or consignees for distribution of carload freight to be unloaded by the carriers upon payment of an additional charge of 2½ cents per 100 lb. for the service of unloading, sorting and delivery across carriers' station platforms or reforwarding by rail carriers (including delivery to connecting lines). Carriers' agents, upon request, will prepay freight charges from point of distribution to destination provided satisfactory guarantee of such charges is made in advance of movement.

### Bad Washout in California

Probably the worst washout in the history of the Southern Pacific occurred on September 30 when a cloudburst on the north slope of the Tehachapi mountains forced a hole 200 ft. long and 30 ft. deep in a concrete deflecting wall at Woodford, Cal., and washed out several hundred feet of track on the Valley line used jointly by this road and the Atchison, Topeka & Santa Fe and destroyed nine bridges between Tehachapi and Bena. Approximately \$300,000 will have to be expended to rehabilitate the line. A Southern Pacific engineman and brakeman have not been accounted for, and unofficial reports state that 40 trespassers riding freight trains were carried into the stream. Service over the Valley line has been discontinued and trains routed over the Coast line. With forces working 24 hours a day it is expected that the debris, which in some places is 25 ft. deep, will be removed, bridges replaced and service restored by October 13.

The greatest damage occurred at Woodford, where the water swept a Southern

Pacific helper locomotive and six loaded cars and a Santa Fe locomotive into the stream. The Southern Pacific locomotive was left standing in the channel with its stack level with the track but the Santa Fe locomotive was buried and had not been found on October 6. The tank of this locomotive was found 500 ft. downstream. The cloudburst occurred three minutes after a northbound passenger train had left Woodford.

At this point the telegraph lines of the Southern Pacific were torn down. These lines are the main trunks between Los Angeles and northern Coast points and as a result all company messages were relayed by way of Chicago. North of Tehachapi the complete destruction of a bridge and the roadbed coupled with the possibility of a recurrence of a cloudburst is of such a serious nature that the company is faced with the problem of either constructing a bridge 1,200 ft. long or relocating its line.

### Reduced Sugar Rates Suspended

The Interstate Commerce Commission has suspended from October 1 to May 1, 1933, tariffs filed by Agents W. P. Emerson and F. L. Speiden proposing to reduce the freight rates on sugar, in carloads, from New Orleans, Mobile, Jacksonville, Savannah, and other South Atlantic and Gulf ports to destinations in Illinois, Indiana, Ohio, Kentucky, Missouri, and Iowa, and intermediate points, which have been the subject of many protests reaching the commission, and of various efforts to avert what it was feared might develop into a rate war. The reductions are understood to have been designed to meet rates proposed by the eastern roads in fourth section applications which were to have been the subject of a hearing on September 23 which was cancelled after the rates had been withdrawn. The eastern lines, on the other hand, were attempting to meet some rather drastic reductions in rates from New York to Chicago made by Hudson river and canal lines. These lines later made overtures toward a stabilization of the situation, and, at a recent conference in Washington with railway traffic officers proposed that both the eastern and the southern reductions be withdrawn pending an adjustment.

### Port of New York Authority Station Opens

The Union Inland Freight Station of the Port of New York Authority was opened on October 3. This new facility which occupies the street floor and basement of the Port Authority Commerce building in New York is designed to serve patrons of all carriers entering that city in the handling of non-perishable I.C.I. freight.

Inbound freight is delivered to consignees on the street level floor on the Fifteenth street side and outbound freight is received on the basement floor. Bills-of-lading must plainly indicate the initial railroad over which shipments are to move from New York; no outbound freight is accepted unless the bill-of-lading is so marked.

For handling the freight between the Union Inland station and rail heads the Pennsylvania, the Baltimore & Ohio, the New York, New Haven & Hartford and the Central of New Jersey have entered a contract with the Railway Express Agency; the New York Central and the Lehigh Valley are employing the Universal Cartage Company; and the Erie and the Delaware, Lackawanna & Western are employing, respectively, the United States Trucking Corporation and the Railway Motor Trucking Company.

### Ticket Delivery by Messenger in New York

Railroad and Pullman tickets are now delivered by uniformed messengers to the homes or offices of travelers in the New York City boroughs of Manhattan, the Bronx and parts of Brooklyn for a nominal service charge, according to a joint announcement made September 29 by the Western Union Telegraph Company and the Trunk Line Association.

This new service, which became effective October 1, makes it possible for the prospective traveler to complete all railroad arrangements without the necessity of going to the ticket office. It will be available by telephoning a request to any one of the several consolidated or city ticket offices during their open hours and also at several of the railroad terminals from 8:30 a. m. to 10:00 p. m.

A charge of 50 cents covering messenger service will be collected in addition to the fare upon delivery of the tickets, except to outlying sections of Brooklyn, where the delivery charge will be slightly higher.

The arrangement will apply to the Baltimore & Ohio, Central of New Jersey, Delaware, Lackawanna & Western, Erie, Lehigh Valley, New York Central, New York, New Haven & Hartford, New York, Ontario & Western, Pennsylvania and West Shore and the New England Steamship Company.

### Society of Officers, Eastern Veterans, Meets at Boston

The annual meeting of the Society of Officers, Eastern Associations of Railroad Veterans, was held at the Hotel Westminster, Boston, Mass., on October 1 and 2, with about 175 members and guests in attendance. In the absence, because of illness, of Captain W. F. Cogan, president, the business meeting was in charge of P. Joseph Mullin, first vice-president.

Officers elected for the ensuing year were as follows: President, P. Joseph Mullin, N. Y., N. H. & H., Boston; first vice-president, C. E. Correll, Erie, Scranton, Pa.; second vice-president, J. W. Beakes, N. Y., O. & W., Middletown, N. Y.; secretary-treasurer, M. W. Jones, B. & O., Baltimore, Md.; board of governors, A. G. Slack, L. I., R. G. Lewis, Erie, J. M. Wooldridge, N. Y. C., Warren Luckenbill, L. V., J. H. Smith, N. Y., O. & W., John Draney, D., L. & W., W. H. C. Burroughs, Penna., J. M. Garvey, B. & O., Luther Fritts, C. N. J., Martin Crippen, D. & H., H. P. Wells, B. & M., and L. G. Bentley, C. & O.

Entertainment included sightseeing

trips in Boston, Concord and Lexington, and a banquet at which E. G. Buckland, chairman of the board, N. Y., N. H. & H., was the principal speaker. Other banquet speakers included Mayor Curley of Boston; Percy R. Todd, president, Bangor & Aroostook; George D. Ogden, vice-president, Penna., and W. Simonds, president, Boston, Revere Beach & Lynn.

Scranton was selected as the convention city for 1933.

### Great Lakes Advisory Board

The Great Lakes Regional Shippers' Advisory Board held its regular meeting at Buffalo, N. Y., on September 28. A few commodities—grain, potatoes, live stock and sugar, are reported by the committees as likely to move in better volume than one year ago; but a dozen others show decreases; and the decrease on the whole list is estimated at 12.3 per cent. That is to say, the actual number of carloads moved in the last quarter of last year, 264,633, will be reduced this year to 231,991. Potatoes are expected to move this year to the extent of 5,010 cars, as compared with 2,004 cars last year. Other fresh vegetables will probably fall off 50 per cent; and fresh fruits, other than citrus, 50 per cent. Other expected decreases are: Ore, 60 per cent; gravel, etc., 26; lumber, etc., 8; iron and steel, 15; machinery and boilers, 12; cement, 25; brick and clay, 30; lime and plaster, 14; agricultural implements and vehicles, other than automobiles, 15; fertilizers, 18; paper, etc., 12; canned goods, 10 per cent. The committee report on automobiles estimates a movement about the same as in the fourth quarter of last year.

The Board adopted the recommendation of the executive committee that the by-laws of the board should be amplified to open the door to consideration of traffic and transportation problems; though it is not proposed to discuss sectional or individual rates.

W. H. Chisholm, Toledo, Ohio, is chairman of a committee which was chosen to prepare nominations for officers to be voted on at the annual meeting next March.

The address of John J. Pelley, president of the New York, New Haven & Hartford, at the noon-day luncheon of the Board, was reported in the *Railway Age* of October 1.

### The Canadian Roads in August

Gross revenues of \$11,328,017 for the month of August, a decrease of \$2,981,793 from the receipts of August, 1931, are shown in the monthly statement of revenues and operating expenses of the Canadian National. The reduction in gross revenues during the month was largely offset by a reduction in operating expenses, economies practised by the management bringing these expenses down to \$11,118,841 or \$2,676,933 less than the figure for the corresponding month of last year. Net revenues for August this year were \$209,175 against net revenues in August, 1931, of \$514,034, a decline of \$307,859.

For the eight months period of the calendar year, gross revenues of the na-

tional system were \$93,118,292, a decrease of \$24,274,618. Operating expenses for the eight months of 1932 were \$89,747,008, showing a reduction of \$25,467,212 from the costs for the same period of last year. Net revenue for the 1932 period was \$3,371,283 as against \$2,178,688, an increase in net of \$1,192,594. The ratio of operating revenues to gross receipts during the first eight months of 1932 was 96.38 per cent, as compared with 98.14 for the corresponding period of 1931.

Net revenues of the Canadian Pacific for August amounted to \$697,206, as compared with \$1,152,721 in August of last year, a decrease of \$455,514. Gross revenues for the month of \$10,166,228 contrasted with \$11,607,386 in August of last year, a decrease of \$1,441,157, while expenses at \$9,469,022 showed a decrease of \$985,642 from the \$10,454,665 reported for August of last year.

For the eight-month period ended with August, net revenues amounted to \$6,808,793, against \$9,692,312 in the corresponding period of last year, a decrease of \$2,883,518. Gross revenues for the eight months amounted to \$77,880,871, against \$96,101,118 in the same period of 1931, a decrease of \$18,220,247, while expenses at \$71,072,078 showed a decrease of \$15,336,729 from the \$86,408,806 reported for the same period of last year.

## Pennsylvania Rate Rule Called Discriminatory

(Continued from page 510)

same way as the interstate rates. If they had used a higher basic scale than that prescribed in the *Eastern case* or a different distance rule, it is a certainty that determined protest from shippers would have resulted. But the constitutional provision prevents the carriers from carrying rates as high as the interstate basis except between points where there is a working route which is at the same time the shortest possible route. In a state which ranks second in population and manufactures and third in railway mileage it is apparent on the face of things that a considerable diversity of routes would be desired by both carriers and shippers. Yet the Pennsylvania constitution penalizes the maintenance of additional routes by forcing reductions in rates below the interstate level. It is perhaps to respondents' credit that they have chosen to maintain diversified routes even at the expense of revenue, but this price they should not be required to pay. The inevitable effect is that they perform intrastate transportation at lower charges than they receive for interstate hauls of corresponding length, throwing burdens on interstate shippers.

"This proceeding is unique in that it presents the first instance in which the commission has been asked to invalidate an intrastate long-and-short-haul provision and also the first in which the state regulation brought in issue is a constitutional provision. Although ordinarily there might well be a reluctance on the part of the commission to interfere with the operation of a regulation of intrastate commerce which the citizens of a state have deemed of sufficient importance to require

embodiment in their supreme law, any such compunctions may be dismissed here. This particular constitutional provision is a vestige of a form of railroad regulation which flourished in 1873, when the Pennsylvania constitution was adopted, but has long since outlived whatever usefulness it may have had half a century or more ago. That the provision is not necessary in the present public interest of Pennsylvania is indicated by the well-nigh unanimous expressions of the shippers of the state in this proceeding, by the fact that the cumbersome process required for its repeal has already been set in motion, and the further fact that three of the state's supreme court justices including the chief justice, were of the view that the provision should be held inapplicable to present conditions."

## I.C.C. Orders Investigation of Seatrain Lines

After having voted on October 4 not to suspend the water and rail tariffs under which Seatrain Lines, Inc., proposed to begin operating on October 6 its new service between New York and Havana and between Havana and New Orleans, in spite of the numerous protests received, the Interstate Commerce Commission on the same day ordered an investigation concerning the lawfulness of the company's operation and its financial transactions. The investigation is to cover, according to the commission's order, "the lawfulness of the operation of vessels and of the transportation of property in interstate commerce by Seatrain Lines, Inc., of the acquisition of control by Seatrain Lines, Inc., of the Hoboken Manufacturers' Railroad Company; and of the issuance of securities by Seatrain Lines, Inc., with a view to determine whether such operation and transportation, acquisition, and issuance are in conformity or consistent, respectively, with the provisions of section 1(18), section 5(2), section 20a, or of any other provisions of the interstate commerce act."

After a long controversy during the past year over the ocean mail contract awarded the Seatrain company and the construction loan which it received from the Shipping Board, its preparations for beginning operations were the signal for renewed objections from many interests which have taken on many technical aspects because the operation of an ocean vessel carrying loaded freight cars without breaking bulk has apparently brought into question laws and regulations applying to both rail and water service. Protests asking suspension of the Seatrain tariffs had been filed by eastern and southwestern railways, the Southern Pacific steamship lines, and many shipping interests, and the commission on October 4 also declined to grant a sixth section application filed by the eastern railways for authority to make their rate tariffs inapplicable by the Seatrain route on short notice. The Southern Pacific lines made the point that the company could not lawfully operate without a certificate of public convenience and necessity on the ground that its service was an extension of the service of the Hoboken Manufacturers' railway. Other objections were based on the fact that the Seatrain opera-



tion would introduce an operation "subsidized" by the government into the coastwise service, while others took the position that it proposed to maintain rates for a non-break-bulk service which had been intended to reflect the disadvantage of break-bulk service. The reference in the commission's investigation order to section 5 of the act referred to the fact that the Missouri Pacific and Texas & Pacific have a minority stock interest in the Seatrain company, which they have asked the commission to find would not tend to reduce competition.

Another angle of the controversy was aired at a hearing before the Shipping Board on October 5 at which the question was raised as to whether the company could handle cargo of other than Cuban origin or destination under its loan contract which provided for foreign service.

### King Defends Railway Policy

That the makings of the present railway problem in Canada were left by the Conservatives on the doorstep for the Liberals when the latter were elected to power at Ottawa in 1921, and that since then up to 1930 when they were thrown out of power they strove to keep the Canadian National free from political entanglements were two contentions made by Rt. Hon. W. L. Mackenzie King, Canadian Liberal leader at Ottawa, in his first public utterance since the publication of the report of the Royal Commission on Railways. He was presenting anew the Liberal policy during a speech at Seaforth, in Western Ontario, last week. His remarks on railway matters, he said, were provoked by a speech of Hon. Dr. R. J. Manion, Minister of Railways and Canals, in the same district.

Mr. King's reference to railway matters was in part as follows:

"In 1921 practically everything pertaining to the Government owned railways was in a state of bankruptcy and demoralization. Chaos reigned. The properties for the most part, as respects roadbeds, rolling stock and equipment, were either out of date or out of repair. No co-ordination, practically no co-operation between the several systems. Unification nowhere, duplication everywhere, traffic lessening, and cost mounting. Today, the Canadian National System is as fine a railway system as is to be found anywhere in the world—or, at least, was such two years ago.

"I think I am wholly correct when I say that during the time the Liberal Administration was in office, there was no enterprise in which the people of Canada came to have greater pride, or valued more as a national asset, than the Canadian National Railways.

"Why, may I ask, all the change of attitude towards the Canadian National Railways which the country has witnessed on the part of the Government since the present Administration took office? There has been no end of detraction of the railways, and of many of those charged with its direction and management. There has been nothing too small for criticism. No error of judgment, or questionable act, but the energies of an entire political party have been bent to making it a mountain of wrong.

"I just wish to make clear that the Liberal Party takes pride in the Canadian National Railways system, takes pride in what was accomplished by Sir Henry Thornton and his board of directors during the time that they were in office and were given by the Government of the day a hand free from all political control, and that the Liberal Party, to the utmost of its ability, intends to see that the Canadian National Railways which in many respects is Canada's greatest asset, are maintained in all their integrity as an independent publicly-owned system, with rights and opportunities in all particulars equal to those of its great privately owned competitor. This was the policy of the Liberal Party as it was announced in 1921 and as it has ever since remained."

### Railway Deficit For Seven Months \$158,687,052

A net deficit of \$158,687,052 for the first seven months of this year is shown for Class I railways in the Interstate Commerce Commission's monthly statement of selected income and balance sheet items. This compares with a net income of \$52,778,786 for the corresponding period of last year. The net railway operating income for the period was \$124,924,130 and other income amounted to \$119,529,026. Dividend declarations for the seven months' period this year amounted to

\$52,000,000, as compared with \$194,000,000 in the corresponding period of last year. The commission's statement follows:

### Truck Association to Meet in Washington

The American Truck Association, which was organized in August, 1931, has issued a call for a meeting of the executives of motor truck carrier companies to be held in Washington on November 17 and 18, to consider various problems facing the trucking business, including proposals for federal legislation to provide for regulation of motor transportation from the standpoint of the truck operators. The notice of the meeting, issued by N. W. Guthrie, of Washington, legislative chairman of the association, said that heretofore such issues have been publicly discussed by manufacturers of motor vehicles and allied interests. The notice also said that the truck lines are willing to co-operate with their competitors in "any reasonable co-ordination of service" but that their investments are now so great that "destructive legislation cannot be tolerated because it would create almost as much chaos in the economic life of the country as would be experienced by the wiping out of its railroad investment." Lacey McClaskey of Louisville, Ky., is chairman of the association.

### Selected Income and Balance-Sheet Items of Class I Steam Railways In the United States

Compiled from 160 reports representing 164 steam railways, including 17 switching and terminal companies.

Month of July		Seven Months	
1932	1931	1932	1931
<b>Income Items</b>			
\$11,795,897	\$57,213,602	\$124,924,130	\$298,701,057
14,985,758	22,177,497	119,529,026	155,465,001
26,781,655	79,391,099	244,453,156	454,166,058
11,113,851	11,288,136	76,832,807	77,137,640
44,704,553	44,192,815	311,257,657	309,179,819
2,268,099	2,276,615	15,049,744	15,069,831
58,086,503	57,757,566	403,140,208	401,387,290
31,304,848	21,633,533	158,687,052	52,778,786
678,101	4,394,167	42,252,170	160,424,832
580,735	357,833	10,303,332	34,042,010
<b>Selected Asset Items</b>			
<b>Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)</b>			
11. Cash	252,036,373	373,049,514	
12. Demand loans and deposits	36,945,339	48,638,660	
13. Time drafts and deposits	25,510,274	77,971,533	
14. Special deposits	27,927,313	47,837,877	
15. Loans and bills receivable	13,736,789	8,020,968	
16. Traffic and car-service balances receivable	45,178,296	70,130,949	
17. Net balance receivable from agents and conductors	37,368,222	50,519,313	
18. Miscellaneous accounts receivable	150,072,937	176,984,873	
19. Materials and supplies	343,363,666	404,706,737	
20. Interest and dividends receivable	30,300,365	35,736,497	
21. Rents receivable	2,088,719	3,671,741	
22. Other current assets	7,173,619	12,305,636	
23. Total current assets (Items 11 to 22)	971,701,912	1,303,574,298	
<b>Selected Liability Items</b>			
<b>Funded debt maturing within six months*</b>			
24. Funded debt maturing within six months*	93,571,508	79,572,908	
25. Loans and bills payable	270,855,732	181,228,235	
26. Traffic and car-service balances payable	62,901,526	96,382,780	
27. Audited accounts and wages payable	215,003,341	277,985,661	
28. Miscellaneous accounts payable	73,534,402	68,342,949	
29. Interest matured unpaid	148,648,761	133,011,378	
30. Dividends matured unpaid	9,578,253	27,368,754	
31. Funded debt matured unpaid	50,399,918	41,707,136	
32. Unmatured dividends declared	1,188,766	18,845,311	
33. Unmatured interest accrued	107,520,175	108,735,983	
34. Unmatured rents accrued	23,237,216	23,273,612	
35. Other current liabilities	15,918,910	21,986,999	
36. Total current liabilities (Items 25 to 35)	978,787,000	998,868,798	

Complete data for the following Class I railways not available for inclusion in these totals: Canadian National Lines in New England, Canadian Pacific Lines in Maine, and Canadian Pacific Lines in Vermont.

\* Includes payments which will become due on account of principal of long-term debt (other than that in Account 764, Funded debt matured unpaid) within six months after close of month of report.

## Foreign

### Great Western to be Included in British Pooling Plan

The London, Midland & Scottish and the Great Western of Great Britain have jointly submitted for the consent of the Minister of Transport, under Section 19 of the Railways Act, 1921, heads of agreement for the pooling of revenues derived by them from passenger, merchandise and other traffic conveyed by rail in respect of which there is competition between the two companies. The London, Midland & Scottish, the London & North Eastern and the Great Western have also jointly submitted for official approval a proposed agreement for the pooling of revenues from traffic for which there is competition between the three companies.

In submitting these heads of agreement, the companies concerned have intimated that the undertakings given by counsel to shippers and employees on behalf of the London, Midland & Scottish and the London & North Eastern during the proceedings before the Railway Pool Committee, as set forth in the report of that committee (abstracted in the *Railway Age* of October 1, page 473), will extend to the further agreements now submitted, except that the Great Western is not to be debarred from retiring employees before they reach the ages specified in cases where the men concerned, under existing practice, receive pensions at earlier ages.

The pooling proposals now submitted for the consent of the Minister of Transport appear to be similar to the agreement outlined in the *Railway Age* of July 2 and published in full in the issue of October 1 for the pooling by the London, Midland & Scottish and the London & North Eastern of all revenues received by those two companies from traffic for which there was competition between them. This earlier agreement was recently approved by the Minister and is now being put into effect, while the present plan constitutes, practically speaking, an extension of that scheme to include the Great Western.

Section 19 of the Railways Act provides that before giving his consent to any such agreements the Minister shall, unless it appears to him that the matter is one of such small importance that it is unnecessary to do so, refer the matter for consideration and report to a special committee. He has, accordingly, referred the present plan to the same committee which on July 27 reported favorably on the L. M. S.-L. N. E. pool—Sir Walter B. Clode, K. C., Herbert Edgar Parkes and John Quirey, C. B. E., all three of whom are permanent members of the Railway Rates Tribunal. This committee will open public hearings in the near future.

A JOINT MEETING of the Chicago Claim Conference and the Eastern Claim Conference will be held at Buffalo, N. Y., on October 26-28. The principal subjects to be considered will be uniformity in claim payments and claim prevention.

## Equipment and Supplies

### LOCOMOTIVES

CHICAGO GREAT WESTERN.—See item under Freight cars.

### FREIGHT CARS

THE PACIFIC FRUIT EXPRESS is now inquiring for 150 to 300 steel underframes.

THE CHICAGO GREAT WESTERN will purchase 300 box cars and 200 gondola cars and is considering the purchase of ten locomotives, according to an announcement made by P. H. Joyce, chairman and president. Inquiries will be sent out within 30 days.

### IRON & STEEL

THE NORFOLK & WESTERN will purchase 5,000 tons of 130-lb. rails, with fastenings, for current renewals.

THE NEW YORK CENTRAL has ordered 350 tons of steel for an underpass at Detroit, Mich., from the Whitehead & Kales Company.

THE CENTRAL OF NEW JERSEY has given a contract to the Shoemaker Bridge Company, for about 100 tons of steel for a bridge under construction at Springtown, N. J.

### SIGNALING

DELAWARE & HUDSON.—This company has petitioned the Interstate Commerce Commission to vacate its automatic train-control order requiring the company to maintain and operate automatic train-control between Albany, N. Y., and Rouses Point.

### MISCELLANEOUS

THE UNITED STATES NAVY DEPARTMENT, Bureau of Yards and Docks, has ordered one 45-ton gas-electric locomotive crane from the Atlas Car & Manufacturing Company.

### Big Four Shopmen Return

Approximately 1,600 shopmen were put to work at the Beech Grove shops of the Cleveland, Cincinnati, Chicago & St. Louis on September 29. Of these, 1,000 were in the locomotive department, 500 in the car shops and 100 in the storeroom. The company has put 250 men to work in the shops in the last two weeks.

### The Central of New Jersey Recalls Men to Its Shops

The Central of New Jersey recalled 195 men to its Elizabethport, N. J., repair shops and also recalled 38 men to its car repair shops at Ashley, Pa. on October 3. These shops have been closed since May 31. The management hopes to be able to work the above force on a five-day week basis until the first of the year.

## Supply Trade

Studebaker eight-cylinder bus chassis, will henceforth be sold direct to operators instead of through distributors, according to a recent announcement of the Studebaker Division, S. P. A. Truck Corporation.

The Ohio Equipment Company, Inc., 5716 Euclid avenue, Cleveland, Ohio, has been appointed by the Cole Automatic Nut-Lock Corporation, Elwood, Ind., its sole distributors for the Cole automatic nut-lock.

The Baldwin Locomotive Works and subsidiary companies have been licensed by the Dardelet Threadlock Corporation to manufacture, for their own use, bolts, nuts and other parts threaded with the Dardelet self-locking thread.

F. J. Rudd has been appointed managing engineer of the motor department of the General Electric Company at its River works, Lynn, Mass. He succeeds L. E. Underwood, who has been appointed manager of the Pittsfield, Mass., works.

D. S. Ellis, manager of the railroad division of the Worthington Pump & Machinery Corporation, Harrison, N. J., resigned on October 1, to return to railway work. W. M. Vinnedge has been appointed eastern regional manager of the railroad division of the Worthington Pump & Machinery Corporation to succeed Mr. Ellis, with headquarters at Harrison.

The traffic organization of the American Bridge Company, American Sheet & Tin Plate Company, American Steel & Wire Company, Carnegie Steel Company, H. C. Frick Coke Company, Illinois Steel Company, National Tube Company, United States Coal & Coke Company, subsidiary companies of the United States Steel Corporation, is now as follows: Eastern district, general offices Pittsburgh, Pa., W. S. Guy, traffic manager, C. W. Trust, assistant traffic manager; Western district, general offices Chicago, M. N. Billings, traffic manager, W. O. Davis, assistant traffic manager.

### OBITUARY

Belden D. Jones, general manager of the Jones Car Door Company, Chicago, died at Chicago on October 3, following a stroke.

Harry Flynn, representative since April 1, 1925, of the New York Air Brake Company at Boston, Mass., died suddenly while on a business trip at Albany, N. Y., on September 25, at the age of 56. Previous to his service with the New York Air Brake Company, Mr. Flynn was for many years general air brake supervisor of the Delaware & Hudson.



## Construction

**CENTRAL OF NEW JERSEY.**—This company has awarded a contract for the reconstruction of a highway bridge over its tracks at Springtown, N. J. The new bridge will be of steel construction with concrete abutments, will require about two months to complete, and will replace an earlier structure destroyed by fire some time ago.

**CHICAGO, BURLINGTON & QUINCY.**—A contract for the construction of 12 reinforced concrete grain storage tanks and accompanying facilities, including six interstices, at Burlington, Iowa, has been awarded to the Burrell Engineering Company, Chicago, at a cost of about \$100,000. The tanks, which will have a combined capacity of 500,000 bu., will be 24 ft. in diameter and 110 ft. high. They are being constructed in connection with an elevator that is leased to the Trans-Mississippi Grain Company.

**DELAWARE & HUDSON.**—The grade crossing of this company's tracks at Esperance station, Duaneburg, N. Y., has been designated for elimination by the New York Public Service Commission, by constructing a new underpass at a point about 1,300 ft. west of the present crossing.

**GALVESTON, HARRISBURG & SAN ANTONIO.**—This company has applied to the Interstate Commerce Commission for a certificate authorizing the construction of a line of 8 miles in Maverick county, Tex.

**GREAT NORTHERN.**—This company now has under construction at St. Cloud, Minn., a one-story and basement fruit warehouse, 63 ft. by 120 ft., which has a total estimated cost of \$35,000. The basement of this structure, which is being constructed of concrete, brick and tile with an insulated wood roof, will contain three banana conditioning rooms, one cold storage room

and storage space, while two cold storage rooms, other storage space and the offices will be located on the first floor. The cold storage rooms will be cooled by an eight-ton refrigerating machine to be installed by the Westerlin & Campbell Company, St. Paul, Minn. Edward Hirt & Son, St. Cloud, have the contract for the construction of the building.

## Financial

**AKRON, CANTON & YOUNGSTOWN.**—*Note.*—The Interstate Commerce Commission has authorized this company to issue a note for \$24,000 payable to the Reconstruction Finance Corporation to evidence a loan.

**CENTRAL OF NEW JERSEY.**—*R.F.C. Work Loan.*—The Interstate Commerce Commission on September 28 approved this company's application for a "work loan" of \$500,000 from the Reconstruction Finance Corporation to be used in repairing locomotives and freight and passenger cars at the company's shops and marine equipment for handling freight traffic in New York harbor. The company is required to assign its distributive share in the fund administered by the Railroad Credit Corporation as security for the loan.

**CHICAGO & EASTERN ILLINOIS.**—*R. F. C. Loan.*—This company has filed with the Interstate Commerce Commission and the Reconstruction Finance Corporation a supplemental application for an additional loan of \$338,000 to cover its requirements for the remainder of the year, including taxes, equipment notes, and \$100,000 for new rail.

**CHICAGO & NORTH WESTERN.**—*R.F.C. Loan.*—The Interstate Commerce Commission on September 29 approved a

further loan of \$12,461,350 to this company from the Reconstruction Finance Corporation, on its application for \$26,000,000, of which \$7,600,000 was approved on February 23, and of which \$6,643,083 had been advanced by the corporation. The additional loan is to pay one-half of the company's bank loans aggregating \$10,000,000 from 18 banks, maturing October 13, which had been arranged by Kuhn, Loeb & Co., and bear interest at 4¾ per cent, and additional amounts for interest and payments on equipment trust certificates. Kuhn, Loeb & Co., has obtained from each of the banks a tentative agreement to continue to carry one-half of the loans for a further period of two years and the commission's approval is on condition that this be done. Another condition is that the Railroad Credit Corporation liquidate the company's order on it for \$1,910,500, now deposited with the Finance Corporation.

**CHICAGO, NORTH SHORE & MILWAUKEE.**—*Receivership.*—This railroad was placed in receivership by Federal Judge James H. Wilkerson, Chicago, on September 30 on petition of the American Brake Shoe & Foundry Company. Britton I. Budd, president of the road, and Col. A. A. Sprague, commissioner of public works of Chicago, were appointed receivers. The claim of the petitioning creditor was for \$3,897 but it was set forth that the road owes other creditors a considerable amount and that it will be unable to meet taxes and interest payments of approximately \$285,000 due on October 1. A loan of \$1,150,000 was obtained on June 29 from the Reconstruction Finance Corporation in an attempt to forestall receivership. It was secured by first mortgage bonds but the loan, it was stated, proved insufficient due to decline of traffic and revenues. Current liabilities as of June 30 exceeded current assets by more than \$3,000,000. Operating revenues for the 12 months ending in June were \$1,500,000 less than for the previous 12 months period and \$3,500,000 less than for the 12 months ending June, 1929.

### The Pot and the Kettle

After calling the St. Lawrence ship canal project "unnecessary" and "impracticable economically," the New York State Waterways Association made plans today to "sell" the New York barge canal in the Middle West and in Washington.

The association voted to ask that the barge canal be deepened from twelve to fourteen feet. Members indicated in addresses at the convention which closed today that they believed the barge canal, deepened and widened, could carry all the commerce the Great Lakes could pour into it and that it offered the shortest and cheapest route from the lakes to the sea, connecting at Albany with the deepened Hudson. Particularly did they object to the United States helping to build the St. Lawrence seaway because it would lie mostly in a "foreign" country.

Peter G. Ten Eyck of Albany, president, said an educational campaign would be one of the weapons in the "finish fight" to prevent ratification of the St. Lawrence treaty with Canada and to bring the possibilities of the New York route before the country and Congress, and the Middle West in particular.

Some of the speakers indicated they believe a publicity campaign had "sold" the Great Lakes territory on the St. Lawrence route and that they believed the merits of the New York route would bring it into favor once they were placed before the country. Mr. Ten Eyck also condemned the St. Lawrence as a power source, saying development of electricity would be so costly that the power could not be sold in competition with steam-generated electricity. He said the interest on the investment for St. Law-

rence power would be \$162,000 per day for fifty years.

William J. Flynn, vice-chairman of the Albany Port District Commission, told the association that neither cheap electricity nor economical transportation could be expected from the St. Lawrence river.

He said that the St. Lawrence would provide a seaway for seven months a year at the longest and that during this period it would work hardship on the railroads which were expected to furnish transportation the rest of the time.

He proposed that Canada develop the St. Lawrence route and the United States deepen and widen the New York Barge Canal so that full use could be made of its possibilities.

—From an Associated Press report of a meeting of the New York State Waterways Association at Buffalo, N. Y.

**CHICAGO, ROCK ISLAND & PACIFIC.—Abandonment.**—The Interstate Commerce Commission has authorized this company to abandon a branch line extending from Trosky, Minn., to Jasper, 8.7 miles.

**COLORADO-KANSAS.—Trustee Sale.**—The properties of this company, which operates between Pueblo, Colo., and Stone City, were sold on October 1 at a trustee's sale, under a mortgage, to L. D. Riker of Oklahoma City, Okla., who will continue its operation. The sale is subject to the approval of the court.

**COPPER RANGE.—R.F.C. Loan.**—The Interstate Commerce Commission has approved a loan of \$53,500 to this company from the Reconstruction Finance Corporation, for interest requirements, on its application for \$114,000.

**LAKELAND.—R.F.C. Loan.**—This company has withdrawn its application for a loan of \$12,000 from the Reconstruction Finance Corporation and the commission has dismissed it.

**LEHIGH VALLEY.—R. F. C. Loan.**—This company has applied to the Reconstruction Finance Corporation for a loan of \$3,000,000 to meet its fixed charges and taxes.

**MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—Abandonment.**—This company has applied to the Interstate Commerce Commission for authority to abandon its Rexton branch from Rexton, Mich., to Hendricks Quarry, 11.91 miles.

**MISSOURI-KANSAS-TEXAS.—Bonds.**—This company has applied to the Interstate Commerce Commission for authority to nominally issue \$17,219,638 of prior lien mortgage 5 per cent bonds, to be pledged as collateral for short term loans.

**NEW YORK CENTRAL.—Abandonment.**—The Interstate Commerce Commission has authorized the St. Clair & Western to abandon and the Canada Southern, Michigan Central and New York Central to abandon the operation of the first mentioned company's line extending from St. Clair, Mich., to Richmond, 14.9 miles.

**NEW YORK, CHICAGO & ST. LOUIS.—Receivership Petition.**—A petition for a receiver in equity was filed in the federal court in Chicago on October 3, by Samuel Caplan. The bill declares the Nickel Plate has \$20,000,000 in 6 per cent gold notes due October 1, which have not been paid and which the road is not able to pay. It also alleges default on \$1,200,000 of other gold notes and that taxes totaling \$18,865 are unpaid. The bill is brought on behalf of holders of gold notes on the ground that since the railroad operates under the laws of New York, Pennsylvania, Ohio, Indiana and Illinois, a multiplicity of law suits will be filed against the road unless a receivership is granted. Attorneys for the railroad asked for a postponement of a hearing on the petition and the court set October 7.

**Note Issue.**—The Interstate Commerce Commission has authorized this company to issue \$20,000,000 of 3-year promissory notes in order to prevent a default in meeting a maturing obligation of equal amount. The Commission has stipulated

that before a loan of this kind be advanced from the Reconstruction Finance Corporation, evidence that holders of substantially all the notes will extend 75 per cent of the principal to a maturity date not earlier than the maturity date of the loan and the company is now endeavoring to secure this consent from the note holders.

**NORTHERN PACIFIC AND MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—Joint Operation.**—The Interstate Commerce Commission has authorized the latter company to operate over a line of the former company between Ironton and McGregor, Minn., the two lines to operate jointly mining tracks on the Cayuna Range; the companies are to pool the ore tonnage moved from, and the coal tonnage moved to, mines in this range.

**PITTSBURGH & WEST VIRGINIA.—Bonds.**—This company has applied to the Interstate Commerce Commission for authority to issue \$434,000 of 6 per cent general mortgage bonds.

**PUGET SOUND & CASCADE.—Acquisition and Operation.**—The Interstate Commerce Commission has authorized this company to acquire and operate lines of railroad extending from a connection with its line at Talc, Wash., to Potts, 1.8 miles; from Potts to Finney Creek Junction, 10.8 miles; and from Burlington southerly to Mt. Vernon, 4.8 miles.

**READING.—Bonds.**—The Interstate Commerce Commission has authorized the Wilmington & Northern to extend from August 1, 1932, to August 1, 1932, the maturity of \$462,000 of general mortgage bonds, to be guaranteed by the Reading.

**ST. LOUIS-SAN FRANCISCO.—Receivership.**—An amended petition asking that a receiver be appointed was filed in the United States District Court at St. Louis, Mo., on October 3 in behalf of Charles and Dora Gans, holders of \$3,500 prior lien bonds, following the dismissal of their previous suit on September 23. The original suit was filed on August 27 and was later joined by nine other bondholders.

**SIERRA OF CALIFORNIA.—R.F.C. Loan.**—The receiver has applied to the Reconstruction Finance Corporation for a loan of \$230,000 for interest, taxes, and current bills.

**WABASH.—Receivers Certificates.**—The Interstate Commerce Commission has authorized the receivers of this company to issue \$4,575,000 of receivers certificates, series B, in settlement of an equal amount of outstanding indebtedness.

#### Average Prices of Stocks and of Bonds

	Oct. 4	Last week	Last year
Average price of 20 representative railway stocks..	28.67	29.81	44.47
Average price of 20 representative railway bonds..	64.73	65.70	77.24

#### Dividends Declared

Cincinnati, Sandusky & Cleveland.—Preferred, \$1.50, semi-annually, payable November 1 to holders of record October 25.  
St. Louis, Rocky Mountain & Pacific.—Common and Preferred dividends omitted.  
York Railways.—Preferred, 62½¢, quarterly, payable October 31 to holders of record October 20.

## Railway Officers

### EXECUTIVE

**J. F. Schurch** has been appointed to the newly-created position of executive representative of the Missouri-Kansas-Texas, with headquarters at San Francisco, Cal.

**Horace Stringfellow**, special assistant in the executive department of the Missouri Pacific, with headquarters at St. Louis, Mo., has been appointed to the newly-created position of executive representative in Colorado, with headquarters at Denver.

**Gerard Ruel**, K. C., vice-president in charge of legal affairs of the Canadian National, has resigned, effective September 30, to accept a legal partnership with Messrs. Peter White and B. Bristol in Toronto, Ont., and his former position has been abolished. Mr. Ruel has been vice-president in charge of legal affairs of the Canadian National since 1923 and has been more than 40 years in the service of Canadian railroads. Born at St. John, N. B., in 1866, he graduated from Harvard University in 1889 with the degree of LL.B., taking up legal practice in his native city, together with additional accountancy and other work for the Shore Line Railway (now part of the Canadian Pacific). He was later a partner in the law firm of Blair, Ruel & Blair, of St. John, of which the Hon. Andrew G. Blair, former Minister of Railways, was the head. Mr. Ruel moved



Gerard Ruel

to Ottawa in 1899 as law clerk in the Department of Railways and Canals, and remained in that position until 1903, when he was appointed assistant solicitor of the Canadian Northern (now part of the Canadian National). In 1918 he was promoted to the position of counsel; in February, 1920, he became general counsel of the Canadian National and the Grand Trunk Pacific, and in January, 1923, he was appointed vice-president and general counsel of the



Canadian National, with headquarters at Ottawa. When these headquarters were moved to Montreal, Que., Mr. Ruel, in May, 1923, became vice-president in charge of legal affairs of the Canadian National, which position he held until his recent retirement.

**Camilo E. Pani**, chief of the personnel department of the National Railways of Mexico, has been appointed assistant executive president of these lines, with headquarters as before at Mexico, D. F. Mr. Pani, who will continue in the capacity of chief of the personnel department, was born on November 2, 1868, at Aguascalientes, Aguas., and was educated in various schools in Mexico, finishing his studies at the Sheffield Scientific School of Yale University in 1887. He entered the service of the National of Mexico on January 1, 1889, as a draftsman in the engineer's office at Aguascalientes, being promoted to chief draftsman in the engineer's office at San Luis Potosí, S. L. P., in June of the same year. From March, 1890, to June, 1910, he was engaged in various phases of railway location, construction and maintenance, serving as topographer and transitman on location and other preliminary work, as assistant resident engineer and resident engineer on port work at Tampico, Tamp., and on the construction of various lines, and in various capacities in the maintenance of way department. At the end of this period he was promoted to supervising engineer of the system, which position he held until April, 1914, when he was further advanced to general manager, with headquarters at Guadalajara, Jal.



Camilo E. Pani

In August, 1920, Mr. Pani returned to the engineering department as assistant chief engineer, with headquarters at Mexico, D. F., and in October of the following year he was appointed sub-chief engineer. Four years later he was appointed a member of the personnel commission and on September 1, 1925, he was advanced to chief of the personnel department, which position he continued to hold until his recent appointment. From 1920 to 1924 Mr. Pani served also as a Mexican Senator.

**P. S. Lewis**, superintendent of the New York division of the Reading, has been appointed assistant to vice-president in charge of operation and maintenance. Mr. Lewis was born on May 10, 1889, at Springfield, Ill., and attended Princeton University, from which he



P. S. Lewis

was graduated in 1911. In July of that year he began his railway career with the Philadelphia & Reading (now the Reading), and has been in the continuous service of this company to the present time, except for the period of the World War. During 1911 he held the positions of rodman at Williamsport, Pa., and construction inspector at St. Clair, Pa. From August 12, 1912, to September 16, 1914, he served as assistant supervisor at Harrisburg and Pottstown, Pa., and on the latter date he was appointed interlocking inspector at Philadelphia, Pa. From 1915 to 1917 he served as supervisor at Camden, N. J., and Olney, Pa., and as trainmaster at Reading, Pa. On September 12, 1917, he entered the service of the U. S. Army and was commissioned first lieutenant of engineers, sailing for France with a light railroad regiment in December of that year. A year later he was commissioned captain of engineers, and in February, 1919, major. While in France he held the positions of executive officer to chief engineer, First Army; executive officer, deputy director-general of transportation, and chief of troop movement bureau, Paris. After he was discharged from the army he again returned to the Reading as trainmaster at Philadelphia, Pa. In April, 1920, he was appointed assistant superintendent of the Atlantic City, a Reading subsidiary, and on August 1, 1921, he was promoted to superintendent of that road. Mr. Lewis was appointed superintendent of the New York division of the Reading on February 1, 1930.

### FINANCIAL, LEGAL AND ACCOUNTING

**B. F. Allen**, assistant general auditor of the Seaboard Air Line, has been appointed auditor of disbursements, succeeding **H. B. Anderson**, who has resigned to engage in other business.

**W. H. Hobbs**, formerly secretary to the president of the Canadian National, has been appointed assistant secretary of that company and of various allied and controlled companies. Mr. Hobbs has been for many years in the service of the Grand Trunk and Canadian National, having entered the service as a stenographer in the legal department; but later becoming secretary to the president, serving four incumbents in that capacity.

### OPERATING

**J. G. Estrada**, division superintendent of express on the National Railways of Mexico, with headquarters at Puebla, Pue., has been promoted to general superintendent of express with headquarters at Mexico, D. F., succeeding **F. Serrano**.

**E. A. Meyer**, superintendent of the Superior division of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Green Bay, Wis., has been appointed manager of the safety and fuel departments, with headquarters at Chicago, succeeding **Martin J. Flanagan**, deceased.

**I. L. Boomer**, assistant to the general superintendent of transportation of the Western region of the Canadian National, with headquarters at Winnipeg, Man., has been promoted to superintendent of transportation of the British Columbia district, with headquarters at Vancouver, B. C., succeeding **L. F. Muncey**, deceased.

**J. E. Burnes**, transportation assistant of the Baltimore & Ohio, with headquarters at Rochester, N. Y., retired effective October 1, and the position has been abolished. The jurisdiction of **John Hewes, Jr.**, transportation assistant, with headquarters at Pittsburgh, Pa., has been extended to cover the Buffalo-Rochester district.

**A. J. Hancock**, assistant to the operating vice-president of the Southern Pacific, Pacific Lines, has been appointed to the newly-created position of assistant general manager, with headquarters as before at San Francisco, Cal. **A. A. Lowe**, assistant superintendent of the Coast division, with headquarters at San Francisco, has been appointed to the newly-created position of supervisor of transportation, with headquarters at the same point.

**C. E. Chamberlin**, superintendent of the Harrisburg division of the Reading, has been appointed superintendent of the New York division, succeeding **P. S. Lewis**, who has been appointed vice-president in charge of operation and maintenance. **Agnew T. Dice, Jr.**, superintendent of the Wilmington & Columbia division, has been appointed superintendent of the Harrisburg division, succeeding Mr. Chamberlin. The

Wilmington & Columbia division, of which Mr. Dice was superintendent, has been abolished, this line being combined with the Reading, Harrisburg and Shamokin divisions, as follows: Wilmington & Northern and Schuylkill & Lehigh branches will become a part of the Reading division; Reading and Columbia Railroad, Harrisburg division; Schuylkill & Susquehanna Branch, Auburn to Rockville, Harrisburg division; that portion of the Lebanon and Tremont branch, Lebanon to Pine Grove, Harrisburg division; Little Schuylkill Branch, Shamokin division; Schuylkill Valley branch, Tamaqua to Mill Creek Junction, Shamokin division.

**José A. Jaime**, who has been appointed superintendent of car service of the National Railways of Mexico, with headquarters at Mexico, D. F., has been connected with these lines continuously for 29 years. He was born on April 21, 1889, at Salamanca, Gto., and received his education at the same place. He entered railway service on July 1, 1903, as a telegraph operator on the National of Mexico at Leon, Gto., serving in this capacity at various points until December, 1908, when he was advanced to telegraph manager at Monterrey, N. L. Mr. Jaime served in this position at various locations until July, 1912, when he was promoted to chief clerk in the telegraph and electrical department at Mexico, D. F., being appointed traveling telegraph inspector in September, 1915. He was transferred to the car service depart-



José A. Jaime

ment as a car distributor at the same point in July, 1919, and was appointed chief clerk to the superintendent of transportation in June, 1920. Four years later, Mr. Jaime was again appointed car distributor and on August 10, 1932, he was advanced to chief clerk in the car service department, receiving his appointment as superintendent of car service a short time later.

**Henry B. Lautz**, assistant general manager of the Northern district of the Western Lines of the Atchison, Topeka & Santa Fe, with headquarters at La Junta, Colo., has been promoted to general manager of the Western Lines, with headquarters at Amarillo, Tex.,

succeeding **J. R. Hitchcock**, who has been transferred to the Coast Lines, with headquarters at Los Angeles. **E. E. McCarty**, superintendent of the Albuquerque division, with headquarters at Winslow, Ariz., has been promoted to assistant general manager of the Northern district of the Western Lines, at La Junta, to succeed Mr. Lautz. **V. H. Wilson**, trainmaster, with headquarters at Los Angeles, Cal., has been appointed acting superintendent at Winslow to replace Mr. McCarty.

Mr. Lautz has spent his entire railway career of 42 years with the Santa Fe. He was born on August 2, 1876, at Pekin, Ill., and attended the public schools at Topeka, Kan. At the age of 14 years he entered the service of the Santa Fe as a messenger in the telegraph department, and after a year he was transferred to the general man-



Henry B. Lautz

ager's office, where he held various positions until December, 1900. At that time, Mr. Lautz was transferred to the office of the president as a clerk and a year later he was promoted to chief clerk in the office of the general manager. In July, 1905, he was advanced to assistant to the general manager and in December, 1916, he was further promoted to superintendent of the Middle division, at Newton, Kan. In November, 1928, Mr. Lautz was again promoted to assistant general manager of the Northern district of the Western Lines, with headquarters at La Junta, Colo., the position he was holding at the time of his recent appointment as general manager of the Western Lines, effective October 1.

## TRAFFIC

**M. J. Golden**, division freight and passenger agent on the Chicago & North Western, with headquarters at Des Moines, Iowa, has been promoted to the newly-created position of assistant general livestock agent, with headquarters at the same point, effective October 15.

**A. G. Bloom**, city passenger agent for the Union Pacific, with headquarters at Omaha, Neb., has been appointed general agent in the passenger department,

with headquarters at Chicago, succeeding **G. R. Lemmer**, deceased. Mr. Bloom has been connected with the Union Pacific for 26 years, having served all but two years of this period in the passenger department.

## MECHANICAL

**John Kyle**, superintendent of motive power and car equipment of the Canadian National at Edmonton, Alta., has been appointed general superintendent of motive power and car equipment of the Western region, succeeding **A. H. Eager**, deceased.

**Elmer A. Kuhn** has been appointed master mechanic of the Canadian division of the Pere Marquette, with headquarters at St. Thomas, Ont. Mr. Kuhn was formerly assistant engineer of motive power for the Advisory Mechanical Committee of the Chesapeake & Ohio; Erie; New York, Chicago & St. Louis, and Pere Marquette.

**D. S. Ellis**, eastern district manager, railroad division, of the Worthington Pump & Machinery Corporation, Harrison, N. J., resigned on October 1 to become assistant engineer of motive power on the Advisory Mechanical Committee of the Chesapeake & Ohio; Erie; New York, Chicago & St. Louis, and Pere Marquette, with headquarters at Cleveland, Ohio.

## SPECIAL

**Herbert A. Enochs**, acting chief of personnel of the Pennsylvania, was appointed chief of personnel effective October 1. He will assume the duties of the late **R. V. Massey** as head of the personnel department.

## OBITUARY

**William Hudson**, superintendent of the Wyoming shops of the Pere Marquette, died suddenly at Grand Rapids, Mich., on October 2.

**G. R. Lemmer**, general agent, passenger department, of the Union Pacific, with headquarters at Chicago, died on September 20 at his home in Evanston, Ill., a suburb of Chicago.

**F. W. Young**, paymaster of the St. Louis-San Francisco, with headquarters at St. Louis, Mo., died on September 24, following a paralytic stroke, at the age of 63 years.

**H. T. Coleman**, mail traffic manager of the Illinois Central, with headquarters at Chicago, died in the Illinois Central hospital at that point on October 1, after a long illness.



**M. S. Belk**, formerly general air brake instructor of the Southern, with headquarters at Washington, D. C., died of heart failure on August 27. Mr. Belk was president of the Air Brake Association in 1927.



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**"The railroads are today overburdened with thousands of locomotives which have outlived their usefulness. Their continued possession constitutes a menace to the vitality of railway transportation."**

—RAILWAY AGE EDITORIAL

Your best locomotives now handle your reduced traffic. As business builds up again more locomotives will be needed.  Don't drag your old locomotives off the scrap pile and expect to maintain your present cost per ton mile.  New Super-Power Locomotives are needed to keep transportation expense at a minimum.



**LIMA LOCOMOTIVE WORKS • Incorporated • LIMA • OHIO**

# Revenues and Expenses of Railways

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1932

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net income from railway operation	Operating income (or loss)	Net revenue, operating income	Net revenue, operating income, 1931
		Freight	Passenger, (inc. mail)	Total	Way and structures	Maintenance of equip-ment	Traffic	Trans- portation				
Akron, Canton & Youngstown.....Aug.	171	\$114,541	\$67	\$115,566	\$21,691	\$15,566	\$9,335	\$39,499	\$9,956	\$95,242	\$24,819	\$30,263
Alton.....Aug.	171	998,728	433	1,054,826	129,547	116,971	80,799	325,555	86,490	733,157	321,669	204,325
Alton.....Aug.	978	885,128	158,530	1,160,577	162,796	114,444	56,375	462,749	849,946	310,631	200,600	146,731
Alton & Southern.....Aug.	1,012	6,972,349	1,434,049	9,472,555	1,177,052	1,224,732	518,543	3,966,775	401,276	7,404,891	2,067,664	391,870
Alton & Southern.....Aug.	31	.....	70,746	70,746	4,022	6,180	4,885	23,484	3,950	42,521	28,225	19,298
Atchafalaya, Topeka & Santa Fe.....Aug.	9,725	7,967,282	1,175,314	9,883,773	592,797	49,316	41,815	39,962	398,278	148,217	127,384	161,667
Atchafalaya, Topeka & Santa Fe.....Aug.	9,724	56,976,460	9,756,994	73,055,843	8,370,606	18,291,703	2,756,174	24,573,731	3,155,361	67,004,424	23,624,475	3,883,461
Gulf, Colorado & Santa Fe.....Aug.	1,955	1,016,195	67,826	1,151,342	141,482	238,607	50,081	383,855	62,628	873,363	277,979	137,690
Panhandle & Santa Fe.....Aug.	1,878	8,295,818	411,450	9,273,980	1,186,664	2,269,140	421,828	3,393,625	591,793	7,856,067	1,417,913	861,560
Panhandle & Santa Fe.....Aug.	1,877	618,108	33,822	701,221	71,010	135,192	19,829	203,129	31,530	460,349	240,872	145,920
Atlanta & West Point.....Aug.	93	72,282	17,623	104,671	17,751	22,945	7,663	51,923	7,539	110,664	5,993	3,822
Western of Alabama.....Aug.	133	561,713	158,527	857,425	145,173	185,973	66,427	413,896	72,662	910,518	53,093	134,826
Western of Alabama.....Aug.	133	65,592	93,423	20,794	27,228	42,509	7,562	42,509	7,010	107,476	14,053	20,941
Atlanta, Birmingham & Coast.....Aug.	639	142,574	7,264	176,159	43,328	55,687	21,521	89,500	15,973	236,137	59,978	74,888
Atlantic Coast Line.....Aug.	639	1,400,671	46,849	1,653,498	411,193	482,516	177,944	702,593	137,324	2,072,313	178,155	231,155
Atlantic Coast Line.....Aug.	5,144	20,436,646	3,654,902	26,801,859	4,184,758	5,868,639	1,029,959	10,466,575	1,152,941	22,950,200	3,871,659	5,073,377
Charleston & Western Carolina.....Aug.	342	98,662	1,145	103,063	16,884	21,226	6,366	44,098	5,375	93,499	9,114	5,888
Baltimore & Ohio.....Aug.	342	1,076,157	12,081	1,122,389	178,892	259,565	50,927	435,456	42,324	906,798	215,591	87,070
Baltimore & Ohio.....Aug.	6,397	8,216,450	9,807,184	703,048	1,505,966	3,494,522	349,805	3,494,522	543,319	6,647,242	3,159,398	2,657,052
Baltimore & Ohio.....Aug.	6,397	70,682,648	8,468,372	7,253,233	15,549,783	3,396,932	31,748,865	4,984,690	63,615,122	14,904,915	20,853,250	17,915,802
Baltimore & Ohio Chic. Term.....Aug.	85	.....	245,628	29,014	39,147	1,598	130,918	15,686	221,091	221,091	24,537	75,431
Staten Island Rapid Transit.....Aug.	85	.....	2,135,511	198,655	325,235	15,107	1,151,073	133,544	1,865,299	1,865,299	270,232	638,940
Staten Island Rapid Transit.....Aug.	23	38,616	106,491	154,513	12,147	11,938	1,664	80,024	13,531	119,304	35,209	23,973
Bangor & Aroostook.....Aug.	619	156,545	14,748	192,102	29,014	39,147	1,598	130,918	15,686	221,091	24,537	75,431
Belt Ry. Co. of Chicago.....Aug.	53	.....	2,362,758	175,763	234,542	23,980	1,301,360	65,347	1,820,992	1,820,992	741,766	925,526
Bessemer & Lake Erie.....Aug.	225	374,326	1,772	382,684	79,409	167,945	10,733	101,203	38,035	307,352	14,568	433,405
Boston & Maine.....Aug.	206	2,532,457	11,166	2,543,623	424,593	1,250,477	91,737	887,430	322,239	2,976,125	659,458	1,166,452
Brooklyn Eastern Dist. Term.....Aug.	310	571,334	1,079	572,413	440,229	476,155	74,947	1,353,780	176,838	2,535,143	921,921	870,054
Burlington-Rock Island.....Aug.	310	549,939	11,103	599,994	136,374	82,044	35,242	296,583	68,483	617,882	17,888	176,371
Cambria & Indiana.....Aug.	37	82,120	.....	82,120	4,084	11,026	205	22,276	5,881	43,472	31,004	31,350
Canadian Pac. Lines in Maine.....Aug.	37	695,395	.....	695,395	37,194	70,735	1,540	183,383	48,438	341,290	236,320	291,959
Canadian Pac. Lines in Maine.....Aug.	233	997,664	18,795	1,016,459	56,943	9,882	3,178	31,108	7,201	62,803	5,860	35,649
Canadian Pac. Lines in Vermont.....Aug.	85	48,567	17,991	87,280	17,387	16,443	2,090	51,741	2,611	90,272	2,992	28,618
Central of Georgia.....Aug.	1,944	6,098,494	807,234	7,820,593	1,171,661	1,827,766	56,494	397,517	71,448	829,840	105,244	321,081
Central New Jersey.....Aug.	691	1,700,181	597,761	2,478,182	215,359	442,406	53,986	976,586	90,356	1,793,968	684,214	423,480
Central Vermont.....Aug.	692	15,077,270	3,779,820	20,242,576	1,683,036	3,863,043	435,514	8,386,466	773,610	15,267,554	4,975,022	2,954,196
Chesapeake & Ohio.....Aug.	457	347,331	55,708	451,036	86,418	77,557	16,591	192,013	20,236	392,925	58,111	103,869
Chicago & Eastern Illinois.....Aug.	457	2,823,145	381,411	3,600,643	722,280	679,547	129,573	1,592,985	169,084	3,295,524	305,119	474,989
Chesapeake & Ohio.....Aug.	3,144	7,287,708	226,434	8,335,859	901,814	1,181,550	154,017	1,842,352	274,067	4,365,591	3,970,268	3,071,641
Chicago & Eastern Illinois.....Aug.	3,144	57,319,087	1,866,306	61,753,565	6,478,703	10,955,968	1,283,227	15,192,287	2,419,566	36,467,480	25,286,385	18,340,850
Chicago & Eastern Illinois.....Aug.	938	796,254	96,617	987,660	134,467	166,686	57,226	432,466	54,466	851,792	135,868	21,380,150
Chicago & Eastern Illinois.....Aug.	938	6,379,519	773,108	7,946,628	1,060,158	1,542,910	481,523	3,661,843	467,971	7,274,612	672,016	1,095,369

Continued on next left-hand page





# RELIEF

## for over-worked pins and bushings

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Maintenance was checked and power kept in service for longer periods.

On a large eastern railroad a full year's test showed that on 2-10-2 type locomotives the Tandem Main Rod Drive reduced the expense of maintaining rods and bushings from \$0.018 per mile to \$0.003, saving \$0.015 per mile and reducing expense 83.3%. Based on normal mileage, this not only returns many times the cost of the new idea, but also leaves considerable to apply on the general cost of repairs.

The Tandem Main Rod Drive is the modern method of transmitting power.

**FRANKLIN RAILWAY SUPPLY CO., Inc.**  
 NEW YORK CHICAGO MONTREAL

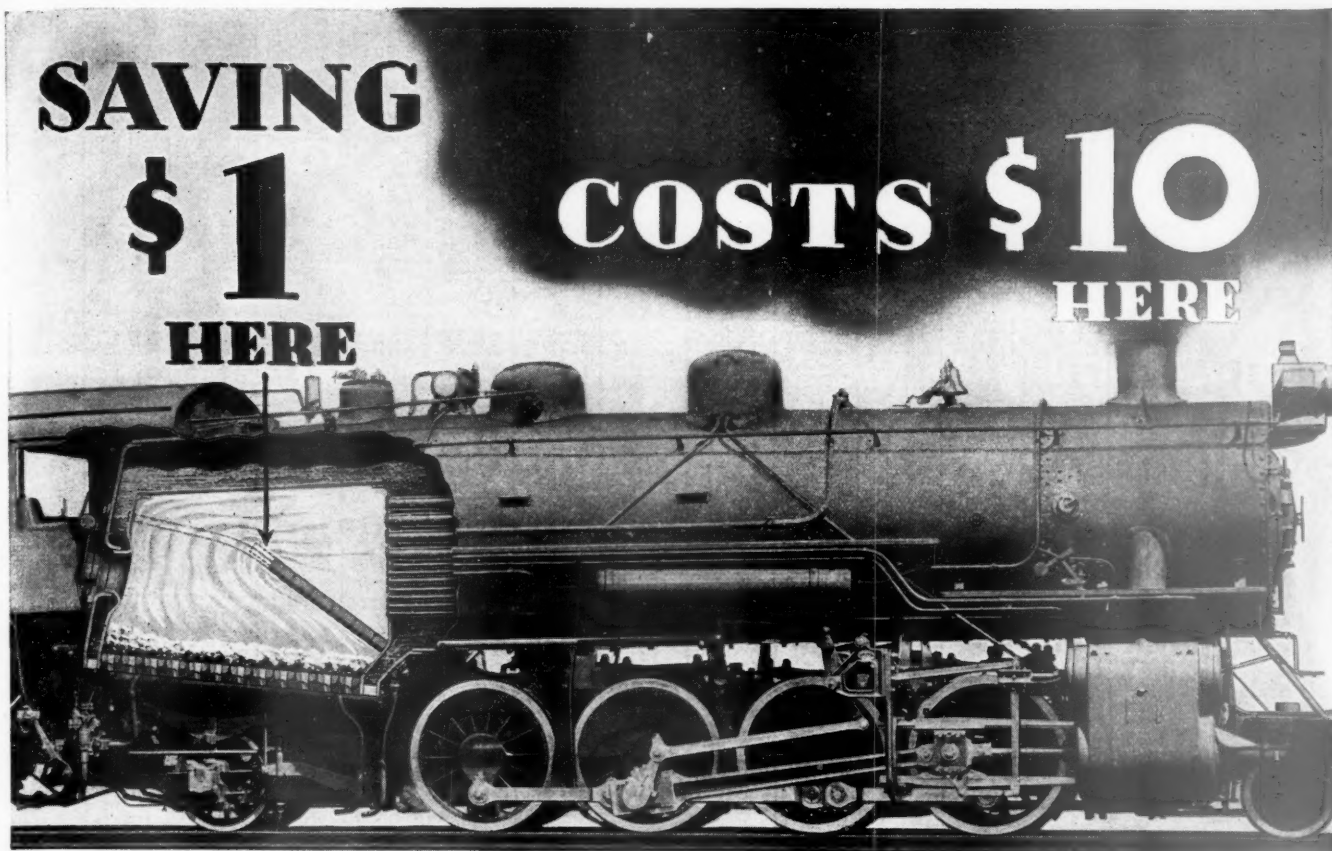
# Revenues and Expenses of Railways

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1932—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Operating income (or loss)	Net operating income, 1931
		Freight	Passenger (inc. misc.)	Total	Way and structures	Maintenance of equipment	Traffic				
Chicago & Illinois Midland.....Aug.	131	\$147,924	\$1,315	\$156,374	\$17,357	\$30,116	\$16,598	80.9	\$29,907	\$126,467	\$6,868
Chicago & Illinois Midland.....8 mos.	131	1,259,916	11,735	1,271,651	128,738	289,738	145,262	83.0	226,094	1,045,557	83,612
Chicago & North Western.....Aug.	8,442	4,829,167	830,289	6,362,601	686,339	1,117,017	1,785,625	75.1	1,585,120	4,777,481	675,867
Chicago & North Western.....8 mos.	8,442	35,224,081	7,155,054	47,982,275	7,198,378	9,532,454	13,477,685	86.7	6,370,014	41,612,261	796,978
Chicago, Burlington & Quincy.....Aug.	9,260	5,229,746	666,773	6,621,850	840,369	970,510	2,011,334	70.8	1,931,190	4,690,660	935,378
Chicago, Burlington & Quincy.....8 mos.	9,260	41,132,800	5,158,662	52,286,913	6,325,913	8,955,403	17,699,266	78.8	13,049,015	39,237,898	5,372,449
Chicago Great Western.....Aug.	1,484	1,068,087	156,626	1,224,713	259,711	1,011,086	57,174	82.8	211,862	1,006,851	224,941
Chicago Great Western.....8 mos.	1,489	8,857,015	1,055,836	10,055,836	1,400,740	1,301,709	491,368	76.0	2,411,897	7,643,939	335,953
Chicago, Indianapolis & Louisville.....Aug.	644	566,396	45,069	686,396	73,065	134,811	25,433	76.8	159,495	526,901	110,610
Chicago, Indianapolis & Louisville.....8 mos.	644	4,209,353	448,250	5,291,627	567,484	1,143,702	212,927	85.3	776,450	4,515,177	15,776
Chicago, Mil., St. Paul & Pacific.....Aug.	11,254	6,289,765	515,031	7,527,642	1,406,859	1,635,922	2,244,428	83.5	1,242,661	6,284,981	403,060
Chicago, Mil., St. Paul & Pacific.....8 mos.	11,269	44,775,804	4,129,719	54,363,682	9,758,810	12,609,056	19,102,260	90.4	5,241,201	49,122,481	3,867,091
Chicago River & Indiana.....Aug.	20	.....	.....	347,419	20,000	20,000	1,344	46.3	186,637	162,782	221,932
Chicago River & Indiana.....8 mos.	20	.....	.....	2,847,555	156,500	206,000	12,302	50.6	1,406,523	1,441,032	1,615,189
Chicago, Rock Island & Pacific.....Aug.	7,620	4,466,143	509,933	5,432,859	561,460	1,084,779	1,946,800	78.6	1,177,017	4,255,842	361,272
Chicago, Rock Island & Pacific.....8 mos.	7,620	36,033,460	4,539,327	45,199,121	4,161,504	9,030,924	15,594,788	80.3	8,903,716	36,295,405	2,016,578
Chicago, Rock Island & Gulf.....Aug.	721	291,419	18,258	315,232	45,105	43,931	16,589	75.1	78,540	236,692	55,439
Chicago, Rock Island & Gulf.....8 mos.	721	2,591,220	201,894	2,893,973	294,804	274,582	138,624	65.7	962,265	2,031,708	347,994
Chic., St. Paul, Minn. & Omaha.....Aug.	1,736	1,172,923	142,363	1,432,859	240,000	234,880	31,501	79.8	289,930	1,142,929	133,182
Chic., St. Paul, Minn. & Omaha.....8 mos.	1,736	7,668,312	1,178,826	9,736,660	1,663,579	1,856,236	269,402	92.1	771,108	8,965,552	456,714
Clinchfield R. R.....Aug.	309	260,263	2,157	267,066	35,401	80,054	14,158	74.8	67,288	199,778	7,105
Clinchfield R. R.....8 mos.	309	2,519,226	18,939	2,577,390	353,468	704,143	131,235	72.2	716,498	2,060,892	20,031
Colorado & Southern.....Aug.	1,030	332,824	37,289	418,751	74,480	98,694	12,297	91.5	35,706	383,045	32,361
Colorado & Southern.....8 mos.	1,032	2,824,404	235,870	3,446,971	588,288	917,506	104,843	93.0	242,996	3,203,975	242,996
Ft. Worth & Denver City.....Aug.	804	331,849	48,414	434,165	43,762	65,784	15,984	65.7	149,074	285,091	115,967
Ft. Worth & Denver City.....8 mos.	721	2,883,490	323,916	3,702,782	418,263	617,418	133,513	65.5	1,278,344	2,424,438	1,018,147
Columbus & Greenville.....Aug.	167	40,150	4,113	48,059	9,422	9,422	3,065	162.1	29,848	18,211	29,848
Columbus & Greenville.....8 mos.	167	400,819	39,926	472,822	147,319	89,501	25,864	114.8	69,806	403,016	65,597
Conemaugh & Black Lick.....Aug.	20	6,501	.....	19,880	4,163	6,505	271	129.5	5,864	25,744	5,864
Conemaugh & Black Lick.....8 mos.	20	98,528	.....	227,699	37,702	63,998	2,890	129.6	5,864	25,744	5,864
Delaware & Hudson.....Aug.	854	1,487,188	167,569	1,654,757	228,281	552,653	44,322	98.5	24,997	1,629,760	79,557
Delaware & Hudson.....8 mos.	854	13,221,866	1,540,370	15,403,770	2,456,639	4,359,511	411,393	97.1	443,950	14,959,820	293,353
Delaware, Lackawanna & Western.....Aug.	998	2,434,717	604,241	3,727,696	375,162	692,478	112,546	81.6	657,316	2,915,380	212,100
Delaware, Lackawanna & Western.....8 mos.	998	21,392,766	5,108,198	26,500,964	3,201,115	6,099,131	988,214	81.5	5,734,217	23,766,747	2,330,414
Denver & Rio Grande Western.....Aug.	2,513	1,216,861	133,601	1,459,591	190,021	257,662	43,474	70.2	434,870	1,024,721	284,723
Denver & Rio Grande Western.....8 mos.	2,540	8,739,828	748,963	10,255,222	1,362,802	2,602,390	377,370	84.0	1,638,048	8,617,174	329,791
Denver & Salt Lake.....Aug.	232	127,897	4,211	143,871	30,492	20,778	1,475	57.3	61,420	82,451	47,420
Denver & Salt Lake.....8 mos.	232	929,185	49,224	1,069,507	185,490	201,921	14,033	62.1	405,525	663,982	280,434
Detroit & Mackinac.....Aug.	242	85,099	3,176	96,090	12,016	12,479	1,242	56.9	41,401	54,689	35,738
Detroit & Mackinac.....8 mos.	242	401,551	24,996	482,818	100,836	81,409	10,760	86.0	67,751	415,067	41,052
Detroit & Toledo Shore Line.....Aug.	50	125,565	.....	126,455	11,393	20,448	7,632	67.9	40,573	85,882	25,903
Detroit & Toledo Shore Line.....8 mos.	50	1,455,622	.....	1,472,247	151,120	183,220	59,428	58.1	616,300	855,947	470,589
Detroit Terminal.....Aug.	19	.....	.....	28,917	4,828	7,760	.....	132.9	.....	24,087	23,668
Detroit Terminal.....8 mos.	19	.....	.....	429,324	40,709	61,768	.....	87.7	52,810	376,514	43,164
Detroit, Toledo & Ironton.....Aug.	487	239,714	395	252,865	28,178	55,318	10,485	83.5	41,615	211,250	4,008
Detroit, Toledo & Ironton.....8 mos.	487	2,906,943	3,537	2,988,644	383,924	562,196	92,142	73.7	787,394	2,201,250	388,205
Duluth, Missabe & Northern.....Aug.	563	416,805	2,247	475,757	95,446	102,236	2,701	79.3	98,385	377,372	71,232
Duluth, Missabe & Northern.....8 mos.	563	1,179,455	13,162	1,391,408	222,686	1,209,997	25,881	235.8	1,889,293	1,954,034	1,954,034
Duluth, Winnipeg & Pacific.....Aug.	178	45,421	6,464	56,753	25,157	10,319	2,949	142.5	24,114	32,639	14,895
Duluth, Winnipeg & Pacific.....8 mos.	178	530,906	29,117	592,494	181,699	149,852	25,169	121.2	125,371	467,123	155,609
Elgin, Joliet & Eastern.....Aug.	447	491,995	.....	530,952	76,695	143,184	11,555	101.4	7,611	523,341	123,311
Elgin, Joliet & Eastern.....8 mos.	447	4,961,550	23	5,382,385	716,170	1,296,282	104,806	93.6	344,065	5,038,320	852,662
Erie Railroad.....Aug.	2,046	4,383,802	520,431	5,359,280	700,096	1,087,771	147,725	77.4	1,210,253	4,149,027	828,851
Erie Railroad.....8 mos.	2,046	34,882,297	4,130,874	43,910,461	4,979,442	9,205,106	1,666,653	78.8	9,125,011	34,785,450	5,967,849
Chicago & Erie.....Aug.	269	635,665	171,116	806,781	107,316	139,595	23,497	67.6	178,218	628,563	484,801
Chicago & Erie.....8 mos.	269	5,112,309	1,921,185	7,033,494	888,734	1,681,326	197,938	67.3	1,876,497	5,156,997	1,458,288

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## • consider the net saving

**I**F a saving at one point results in an increased expenditure in another direction the net result is a loss to the railroad.

To "save" on Arch brick by cutting down the length of the Arch causes a loss of \$10.00 in fuel due to decreased efficiency for every \$1.00 of Arch brick expense thus avoided.

This has been proved by thorough tests on various railroads involving various types of locomotives.

The fuel economy of the locomotive Arch was thoroughly established 20 years ago. In these days when every dollar of expense is under fire, equip the Arch to save every dollar of fuel money.

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THERE'S MORE TO SECURITY  
ARCHES THAN JUST BRICK

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**HARBISON-WALKER  
REFRACTORIES CO.**  
Refractory Specialists



**AMERICAN ARCH CO.**  
INCORPORATED  
Locomotive Combustion  
Specialists

# Revenues and Expenses of Railways

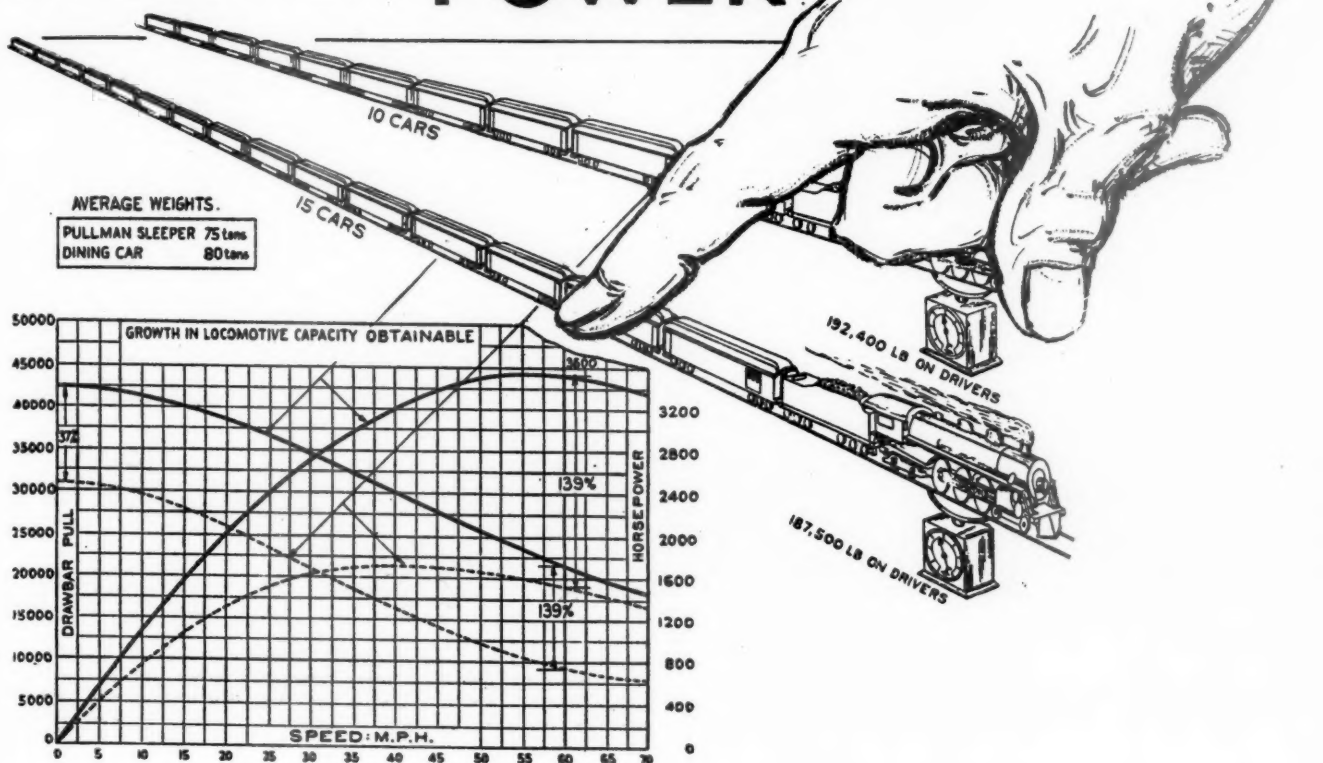
MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1932—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Operating income (or loss)	Net revenue from operating income	Net revenue from operating income, 1931
		Freight	Passenger (inc. misc.)	Total	Maintenance of way and structures	Equip.	Traffic					
New Jersey & New York	45	\$14,503	\$71,347	\$85,850	\$11,683	\$26,320	\$1,397	100.5	—\$248	—\$5,428	—\$24,771	—\$24,401
N. Y., Susquehanna & Western	45	130,309	584,371	714,680	736,377	198,191	12,062	96.0	29,250	—11,922	—169,297	—125,098
N. Y., Susquehanna & Western	131	240,679	31,737	272,416	36,275	53,440	4,413	74.1	74,655	32,077	32,077	27,079
N. Y., Susquehanna & Western	131	1,907,419	244,447	2,151,866	249,232	399,076	37,369	73.3	615,889	357,961	231,150	428,336
Florida East Coast	863	178,098	60,078	238,176	101,716	132,762	17,817	150.0	—139,273	—214,130	—230,555	—243,235
Fort Smith & Western	863	3,126,763	1,269,956	4,396,719	871,744	1,081,832	177,128	78.1	1,102,765	328,071	—28,321	763,734
Fort Smith & Western	249	1,009	47,702	48,711	14,009	5,504	5,123	102.0	—1,069	3,369	—10,094	—17,095
Fort Smith & Western	249	358,484	9,454	367,938	106,875	77,146	37,363	107.5	—29,815	—32,234	—91,752	—110,172
Galveston Wharf	11	.....	.....	.....	39,108	4,007	3,265	75.8	25,791	2,647	2,583	60,015
Georgia R. R.	329	197,454	18,906	216,360	351,123	37,235	28,660	65.6	399,291	214,713	214,713	201,907
Georgia R. R.	329	1,577,766	136,475	1,714,241	257,524	364,953	148,588	88.8	26,074	20,559	29,883	43,273
Georgia & Florida	463	66,053	12,817	78,870	18,449	16,723	8,474	95.7	80,290	23,740	119,893	411,852
Grand Trunk Western	463	523,565	12,086	535,651	153,661	125,073	68,720	109.4	—6,794	—13,494	—11,594	31,072
Grand Trunk Western	1,023	829,607	67,895	897,502	184,419	241,883	44,328	111.7	—114,361	—199,536	—278,589	—204,447
Grand Trunk Western	1,022	8,134,751	563,127	8,697,878	1,383,847	2,121,855	378,592	100.1	—5,707	—791,367	—1,519,486	—769,874
Canadian Nat'l Lines in New Eng.	172	76,492	6,341	82,833	33,093	20,510	3,512	138.8	—36,817	—50,947	—103,811	—1,004
Great Northern	172	625,114	69,893	695,007	185,975	168,355	29,719	110.7	—185,636	—292,176	—653,033	—713,526
Great Northern	8,460	4,384,377	341,818	4,726,195	1,141,451	1,693,470	192,341	77.9	1,141,199	507,868	362,392	1,762,457
Great Northern	8,383	27,103,375	2,758,463	29,861,838	5,917,613	8,606,452	1,480,472	93.6	2,135,068	—2,521,826	—3,701,169	5,203,439
Green Bay & Western	234	86,997	1,251	88,248	25,226	13,581	4,750	90.9	8,449	2,449	214	26,510
Gulf & Ship Island	234	73,042	11,480	84,522	162,394	125,740	35,785	88.7	86,447	34,444	16,146	71,089
Gulf & Ship Island	307	55,941	8,021	63,962	8,547	14,676	2,486	98.7	75,208	—16,774	—25,584	—35,196
Gulf & Ship Island	307	510,031	79,630	589,661	80,533	111,292	26,173	98.7	9,157	—128,957	—204,844	—379,988
Gulf, Mobile & Northern	733	203,804	10,315	214,119	41,717	56,012	24,601	101.50	—3,443	—26,840	—47,084	—24,633
Illinois Central	733	1,854,742	80,085	1,934,827	41,581	141,295	184,745	92.83	148,020	—37,515	—195,006	38,184
Illinois Central	5,014	4,986,620	618,422	5,605,042	461,834	1,240,480	177,102	74.4	1,531,992	1,086,520	937,831	1,298,900
Illinois Central	5,016	40,203,309	5,811,056	46,014,365	4,388,529	6,888,529	1,601,258	76.7	11,813,970	7,547,578	6,596,425	6,714,290
Yazoo & Mississippi Valley	1,673	744,014	73,875	817,889	67,185	132,893	29,675	75.3	216,264	82,829	—8,796	123,572
Illinois Central System	1,676	6,263,479	653,129	6,916,608	444,272	739,416	3,770,416	79.1	1,573,312	487,880	—210,543	—782,843
Illinois Central System	6,687	5,730,634	692,297	6,422,931	529,010	1,373,773	206,777	74.5	1,748,256	1,169,349	929,035	1,422,062
Illinois Central System	6,693	46,466,788	6,464,185	52,930,973	5,132,801	11,598,926	1,860,552	77.0	13,387,282	8,035,458	6,385,882	5,931,447
Illinois Terminal	542	275,951	53,337	329,288	42,810	47,704	14,013	73.22	93,801	76,765	50,278	156,770
Kansas City Southern	543	2,379,249	454,152	2,833,401	381,894	307,351	126,860	74.61	757,359	557,665	34,521	1,040,139
Kansas City Southern	783	561,707	26,729	588,436	68,312	120,291	43,523	77.6	150,977	61,711	50,508	203,408
Kansas City Southern	783	4,814,875	212,507	5,027,382	596,154	1,028,658	356,232	76.6	1,367,220	660,316	475,566	1,627,013
Texarkana & Ft. Smith	99	76,391	1,827	78,218	11,087	6,109	5,993	68.6	27,710	18,860	—970	48,064
Kansas, Oklahoma & Gulf	99	644,054	13,499	657,553	101,058	66,747	48,865	70.5	225,875	154,964	818	330,248
Kansas, Oklahoma & Gulf	326	121,800	372	122,172	17,591	10,964	7,992	61.4	48,083	36,708	23,980	71,411
Kansas, Oklahoma & Gulf	326	1,135,746	3,478	1,139,224	146,058	127,858	76,316	61.5	446,734	328,028	216,369	439,192
Lake Superior & Ishpeming	160	42,574	47	42,621	18,808	9,259	529	105.5	—2,621	—17,469	—19,144	54,622
Lake Superior & Ishpeming	160	202,774	717	203,491	13,375	102,340	4,417	185.8	—190,245	—307,334	—316,194	22,073
Lake Superior & Ishpeming	12	.....	.....	.....	2,606	4,720	1,639	47.6	28,354	25,418	30,942	23,708
Lake Superior & Ishpeming	12	.....	.....	.....	19,801	30,615	110,184	82.1	38,554	16,901	26,816	29,971
Lehigh & Hudson River	96	108,538	675	109,213	10,806	17,473	2,871	69.9	34,978	31,010	9,148	31,053
Lehigh & Hudson River	96	982,150	3,853	986,003	144,371	172,935	25,767	74.9	264,347	165,095	60,117	151,336
Lehigh & Hudson River	216	258,345	882	259,227	28,885	48,938	4,291	70.7	76,314	64,788	7,498	64,372
Lehigh & Hudson River	216	2,136,491	4,060	2,140,551	283,103	470,918	39,474	78.4	466,958	387,787	457,145	546,152
Lehigh Valley	1,362	2,274,079	228,967	2,503,046	366,630	642,933	118,291	92.3	211,852	—16,643	—108,716	238,523
Lehigh Valley	1,362	21,084,213	1,957,011	23,041,224	2,165,853	5,900,619	963,289	84.6	3,917,938	1,930,149	1,160,166	3,169,025
Louisiana & Arkansas	608	300,440	9,264	309,704	42,934	60,605	19,641	67.9	106,570	72,782	70,612	168,874
Louisiana & Arkansas	608	2,417,131	73,351	2,490,482	421,834	452,819	171,133	72.2	749,059	414,256	419,618	879,372
Louisiana, Arkansas & Texas	255	50,666	654	51,320	14,032	5,940	3,551	84.9	8,786	5,595	—4,289	—3,673
Louisiana, Arkansas & Texas	255	3,278,283	3,333	3,281,616	105,918	132,956	28,541	77.4	—1,108	—14,579	—61,299	—91,277
Louisville & Nashville	528	4,277,683	429,401	4,707,084	606,301	909,774	1,182,915	77.2	1,135,175	782,788	83,253	93,297
Louisville & Nashville	528	34,171,329	3,680,041	37,851,370	6,463,215	9,226,437	1,430,644	86.9	5,405,619	1,895,672	2,054,760	6,555,992

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# 3600 HORSE POWER



To Economize  
Modernize

## More Than Twice the Power Capacity

THINK of it—3600 hp. as against only 1500 hp.; 37 per cent more drawbar pull at starting; 139 per cent more drawbar pull at passenger express speed of 60 miles per hour. That shows how vastly superior a modern locomotive proved itself over a 1920 locomotive in the same passenger service on the same railroad. Both locomotives are actual cases. The curves in the above graph represent their actual performance, the dotted curves represent the performance of the 1920 locomotive and the solid curves that of the modern locomotive.

How did the modern locomotive save money and improve operating efficiency?

The modern locomotive now hauls 15 Pullmans instead of 10 at no sacrifice in speed. The longer trains reduced the number of sections on limited trains during times of heavy traffic. Fewer diners are now necessary. Two trains are often combined into one. That reduces costs and increases track capacity. It adds safety for it increases the headway between trains.

Modernize—it is one sure means of securing larger profits from a smaller volume of business.

Modernize—for no matter what the volume of business, cost reduction is always a sound investment.

**American Locomotive Company**  
30 Church Street New York N.Y.

# Revenues and Expenses of Railways

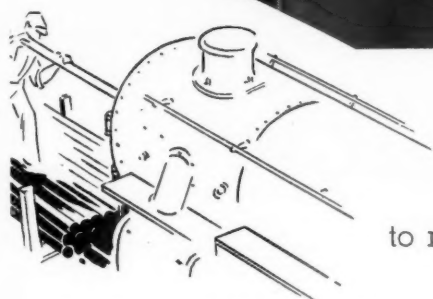
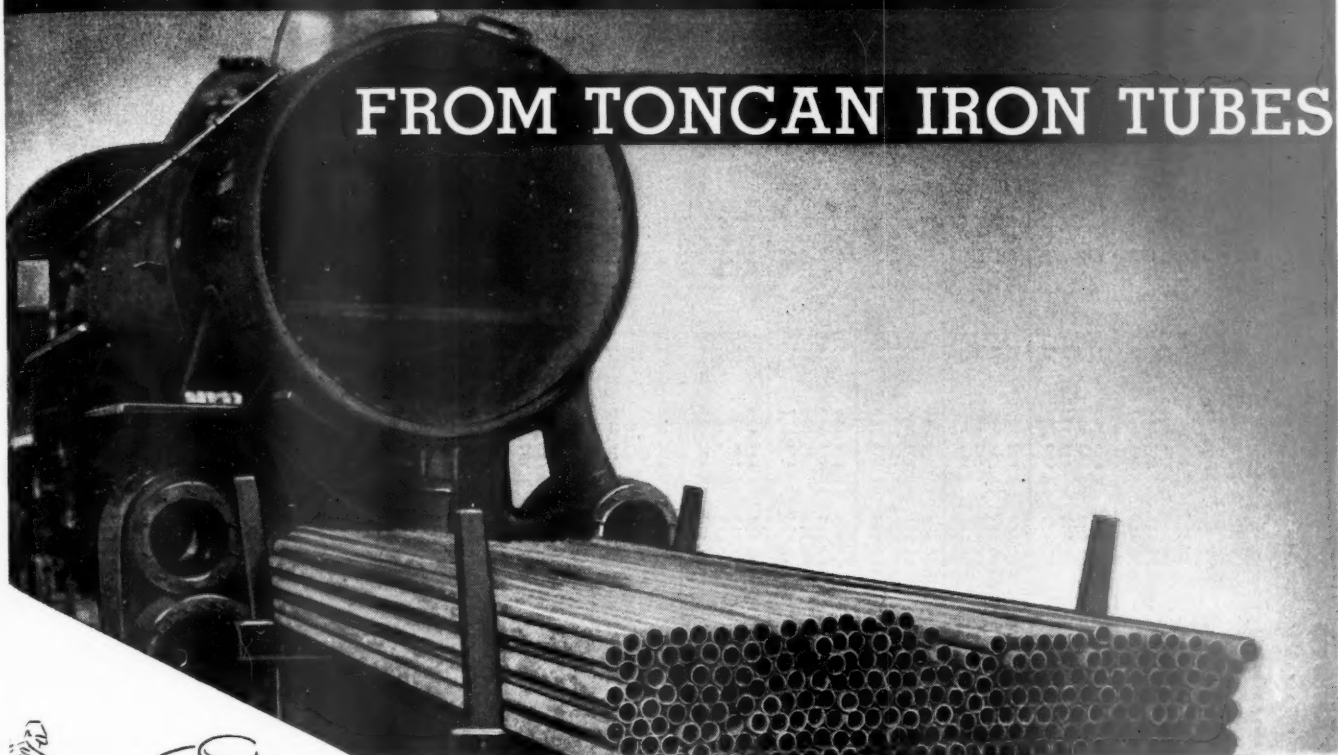
MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1932—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Operating income (or loss)	Net operating income	Net operating income, 1931
		Freight	Passenger	Total	Maintenance of way and structures	Traffic	General					
Maine Central	1,121	\$650,972	\$113,140	\$764,112	\$146,000	\$15,246	\$38,614	78.7	\$186,176	\$128,042	\$98,633	\$187,903
Midland Valley	1,121	6,083,864	887,782	6,971,646	1,271,895	1,278,166	3,069,567	78.2	1,702,423	1,243,767	952,863	1,351,008
Midland Valley	363	112,807	714	113,521	19,778	26,818	6,238	54.6	35,046	43,929	65,351	65,351
Midland Valley	363	939,540	974,691	1,914,231	153,759	30,632	62,734	62.5	365,490	279,217	226,194	306,450
Minneapolis & St. Louis	1,627	688,734	22,104	710,838	114,004	28,721	311,471	84.0	120,335	81,303	55,128	924
Minneapolis & St. Louis	1,627	4,491,001	179,354	4,670,355	826,381	249,649	2,562,389	100.7	3,047,723	383,679	55,157	103,331
Minneapolis & St. Louis	1,627	1,621,535	152,874	1,774,409	1,948,065	66,667	1,712,402	87.9	235,663	57,619	235,663	185,722
Minneapolis & St. Louis	4,349	11,910,474	1,008,066	12,918,540	3,487,250	551,279	13,686,375	96.2	536,975	881,215	1,973,188	289,516
Duluth, South Shore & Atlantic	560	109,473	12,482	121,955	44,394	6,387	8,483	115.0	20,626	46,709	50,921	12,575
Duluth, South Shore & Atlantic	560	895,893	113,993	1,009,886	286,938	52,965	1,270,355	112.4	140,165	357,286	380,238	141,801
Duluth, South Shore & Atlantic	163	44,160	1,904	46,064	18,331	2,569	4,989	104.8	2,416	7,465	9,707	602
Duluth, South Shore & Atlantic	163	305,013	19,479	324,492	124,641	22,801	40,085	114.4	51,563	91,933	110,696	10,515
Mississippi Valley	150	54,348	2,141	56,489	5,684	7,213	17,437	75.5	14,280	10,528	6,190	25,155
Mississippi Valley	150	368,782	11,122	379,904	92,097	62,403	44,597	103.9	15,444	43,866	7,055	75,235
Mississippi Valley	364	1,419,000	1,442	1,420,442	126,068	9,489	3,747	84.0	10,939	8,492	2,916	9,681
Mississippi Valley	364	513,878	11,119	524,997	130,303	62,563	60,377	102.2	12,384	32,064	95,401	56,681
Missouri-Illinois	202	68,033	599	70,632	13,000	3,133	24,456	84.9	10,610	5,527	352	30,070
Missouri-Illinois	202	567,860	4,018	571,878	104,507	26,318	45,597	81.4	108,735	67,048	12,249	105,823
Missouri-Illinois	3,188	1,829,548	186,343	2,015,891	296,197	105,771	1,261,633	78.6	706,233	523,501	374,833	492,808
Missouri-Illinois	3,188	14,260,943	1,513,042	15,773,985	2,606,850	905,924	1,067,341	74.6	4,477,218	2,831,851	1,559,076	2,040,063
Missouri Pacific	7,436	4,613,667	414,557	5,028,224	665,932	207,629	2,611,334	76.5	1,293,930	966,766	693,925	1,830,020
Missouri Pacific	7,436	38,077,545	3,279,681	41,357,226	5,116,594	1,875,106	2,256,788	78.6	9,767,046	6,826,657	4,367,171	12,108,592
Missouri Pacific	1,030	440,819	31,404	472,223	120,226	32,891	43,611	84.66	77,330	30,489	20,345	140,274
Missouri Pacific	1,030	5,247,081	315,726	5,562,807	1,034,351	294,302	366,924	67.22	1,936,911	1,554,871	1,041,791	1,520,569
International-Great Northern	1,159	630,238	64,041	694,279	91,260	22,477	44,765	78.80	165,265	124,743	70,566	342,787
International-Great Northern	1,159	5,492,417	540,804	6,033,221	910,419	238,191	4,140,622	85.33	987,805	653,193	74,485	1,187,833
International-Great Northern	316	56,525	5,620	62,145	14,490	4,022	4,858	91.5	5,733	1,110	19,925	17,901
International-Great Northern	316	615,820	48,741	664,561	162,064	37,419	42,031	72.0	200,942	163,858	39,583	3,566
Mobile & Ohio	1,239	552,364	24,984	577,348	91,334	47,072	42,012	94.7	32,427	19,851	69,592	12,158
Mobile & Ohio	1,239	4,679,314	190,588	4,869,902	1,011,918	361,468	3,232,896	92.2	407,900	55,933	530,890	8,160
Monongahela	177	258,053	752	258,805	20,879	959	6,318	38.3	160,703	145,838	84,567	96,094
Monongahela	177	2,390,363	8,286	2,398,649	235,653	8,610	61,819	43.6	1,361,679	1,239,654	696,453	824,972
Monongahela Connecting	6	.....	35,652	35,652	Cr. 22,644	45	2,563	32.3	24,121	19,300	19,434	8,358
Monongahela Connecting	6	.....	331,485	331,485	66,595	790	21,203	128.5	94,412	133,678	134,050	7,989
Montour	57	102,595	.....	102,595	10,753	1,200	6,151	66.3	34,743	32,897	5,543	91,609
Montour	57	878,495	.....	878,495	99,692	10,945	54,496	74.7	222,749	206,811	352,728	597,678
Nash., Chatt. & St. Louis	1,203	743,737	85,786	829,523	108,017	53,652	49,105	82.1	162,790	120,465	115,564	10,036
Nash., Chatt. & St. Louis	1,203	6,176,286	658,360	6,834,646	1,082,254	471,530	4,897,978	91.4	658,224	312,477	235,218	523,684
Nash., Chatt. & St. Louis	165	19,094	390	19,484	8,636	755	3,516	104.25	1,002	8,889	4,308	5,111
Nash., Chatt. & St. Louis	165	169,892	14,260	184,152	75,157	6,253	30,356	98.3	3,582	55,521	24,194	225,986
Newburgh & South Shore	6	.....	28,469	28,469	6,381	.....	4,620	162.9	17,911	27,970	26,158	14,169
Newburgh & South Shore	6	.....	32,158	32,158	63,474	.....	39,066	117.3	67,868	156,867	133,192	46,775
New Orleans Great Northern	264	112,153	9,624	121,777	12,743	12,002	91,518	72.7	34,332	23,625	3,724	44,204
New Orleans Great Northern	264	987,685	64,983	1,052,668	115,142	99,484	61,757	72.2	303,610	218,342	32,629	297,796
New Orleans Terminal	20	822	.....	822	6,800	.....	1,392	35.8	85,869	74,256	60,606	61,800
New Orleans Terminal	20	9,228	.....	9,228	56,674	.....	40,334	44.1	512,406	419,819	276,474	257,527
New York Central	11,517	14,803,341	4,732,362	19,535,703	4,094,361	463,561	982,004	71.3	6,532,476	3,877,538	2,973,798	2,973,798
New York Central	11,517	127,744,677	41,952,917	169,697,594	20,329,215	4,820,384	9,008,796	79.0	41,388,950	19,946,199	9,921,337	22,463,516
Indiana Harbor Belt	120	.....	563,318	563,318	50,000	2,857	18,467	60.3	223,716	183,080	117,777	117,380
Indiana Harbor Belt	120	.....	4,779,094	4,779,094	475,000	32,544	165,238	66.6	1,595,725	1,257,171	849,414	1,035,134
Pittsburgh & Lake Erie	235	861,100	46,300	907,400	333,476	21,152	54,227	90.3	90,605	2,964	104,451	225,391
Pittsburgh & Lake Erie	235	7,382,543	473,824	7,856,367	681,331	217,441	498,784	92.2	630,533	75,590	898,079	2,341,215
New York, Chicago & St. Louis	1,691	2,108,968	80,006	2,188,974	283,596	100,706	115,197	75.5	559,536	408,379	170,186	259,260
New York, Chicago & St. Louis	1,691	18,216,044	658,797	18,874,841	3,446,461	882,898	1,003,294	75.3	4,234,953	2,775,491	837,923	1,143,954
N. Y., New Haven & Hartford	2,077	3,082,207	1,879,817	4,962,024	791,666	79,946	2,093,842	78.5	1,394,329	1,018,734	1,438,786	1,438,786
N. Y., New Haven & Hartford	2,077	27,678,267	17,024,421	44,702,688	6,347,080	679,301	1,986,808	71.3	14,627,120	11,200,558	7,346,704	12,412,150

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# OVER TWICE THE SERVICE FROM TONCAN IRON TUBES



Every 12 months, a certain western railroad was forced to re-tube the locomotives on a bad water division. « Then they tried tubes of Toncan Iron. After 26 months' service, the Toncan tubes were removed, found to be in excellent condition, and re-applied to a switcher for further service. « By alloying refined iron, copper and molybdenum, a material of greatly improved resistance to corrosion was created. This Toncan Iron makes an ideal boiler tube. Besides resisting corrosion, it can be readily applied. Cold-working has no effect on its corrosion resistance. « Tube with Toncan Iron and reduce boiler maintenance.

Toncan Iron Boiler Tubes, Pipe, Plates, Culverts, Rivets, Staybolts, Tender Plates and Firebox Sheets • Sheets and Strip for special railroad purposes • Agathon Alloy Steels for Locomotive Parts • Agathon Engine Bolt Steel • Agathon Iron for pins and bushings • Agathon Staybolt Iron • Climax Steel Staybolts • Upson Bolts and Nuts • Track Material, Maney Guard Rail Assemblies • Enduro Stainless Steel for dining car equipment, for refrigeration cars and for firebox sheets • Agathon Nickel Forging Steel (20-27 Carbon).

The Birdsboro Steel Foundry & Machine Company of Birdsboro, Penna., has manufactured and is prepared to supply under license, Toncan Copper Molybdenum Iron castings for locomotives.

**REPUBLIC STEEL**  
C O R P O R A T I O N  
GENERAL OFFICES YOUNGSTOWN, OHIO

**TONCAN**  
COPPER  
Molybdenum  
IRON

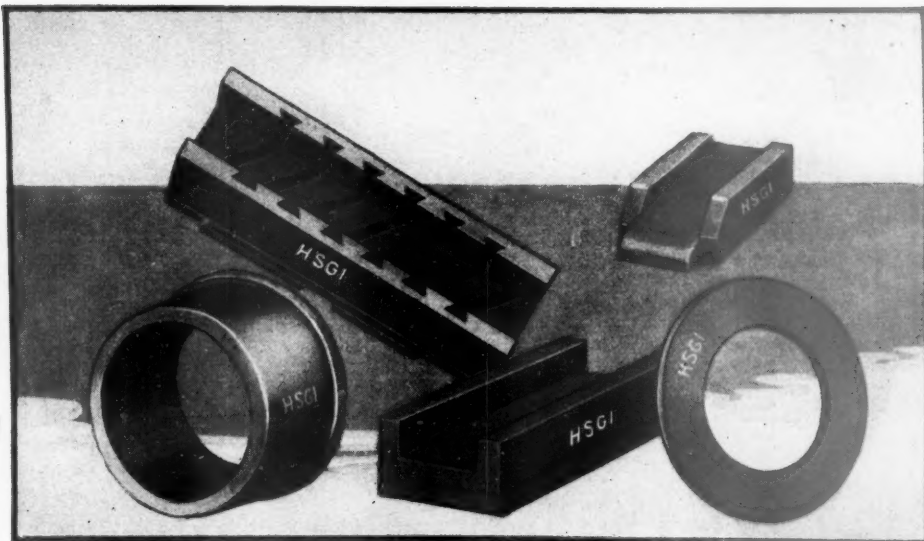
# Revenues and Expenses of Railways

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1932—CONTINUED

Name of road	Av. mileage operated during period.	Operating revenues			Operating expenses			General.	Total.	Operating ratio.	Net from railway operation.	Operating income (or loss).	Net operating income.	Net operating income, 1931.
		Freight.	Passenger.	Total (inc. misc.).	Maintenance of way and structures.	Equipment.	Traffic.	Trans- portation.						
New York Connecting.....Aug. 20		\$186,548		\$197,233	\$15,869	\$6,029		\$31,337	\$58	27.4	\$143,140	\$54,093	\$66,564	\$40,671
New York, Ontario & Western.....Aug. 8 mos.		1,439,597		1,521,239	101,948	36,163		332,090	8,364	24.9	\$1,142,474	\$378,765	\$334,624	\$433,824
New York, Ontario & Western.....Aug. 568		731,940	\$136,327	868,267	146,853	49,339	\$13,286	221,333	22,133	67.6	330,098	265,087	213,179	258,761
New York, Ontario & Western.....Aug. 568		5,563,045	498,805	7,040,372	844,074	1,173,068	109,466	2,616,828	195,482	70.5	2,074,605	1,693,890	1,238,875	1,319,912
Norfolk & Western.....Aug. 2,268		4,535,690	143,911	4,679,601	476,141	824,333	114,406	1,223,551	212,097	58.9	1,993,485	1,418,322	1,485,458	2,267,421
Norfolk & Western.....Aug. 8 mos.		36,429,948	1,145,212	37,575,160	4,309,279	7,707,128	906,846	10,557,498	1,908,508	65.5	13,504,181	8,746,929	9,337,504	14,698,486
Norfolk Southern.....Aug. 932		289,637	12,689	302,326	66,069	59,884	21,358	146,217	21,796	99.9	267	43,617	54,168	3,478
Norfolk Southern.....Aug. 8 mos.		2,647,917	79,367	2,727,284	488,049	513,802	168,176	1,270,369	167,920	90.1	284,980	84,863	195,953	280,998
Northern Pacific.....Aug. 6,235		3,744,053	292,385	4,036,438	557,947	958,713	149,325	1,522,721	252,368	79.4	929,229	309,340	509,700	984,135
Northern Pacific.....Aug. 8 mos.		24,163,948	2,630,845	26,804,793	4,359,630	7,558,906	1,328,535	12,465,030	2,120,119	94.4	1,660,236	3,235,199	1,221,306	2,437,271
Northwestern Pacific.....Aug. 441		1,125,951	104,305	1,230,256	37,017	43,270	6,011	143,865	14,054	79.6	18,857	39,565	27,425	82,947
Northwestern Pacific.....Aug. 8 mos.		1,125,951	104,305	1,230,256	37,017	43,270	6,011	143,865	14,054	79.6	18,857	39,565	27,425	82,947
Oklahoma City-Ada-Atoka.....Aug. 132		23,980	724	24,704	7,995	1,939	868	11,701	1,384	91.3	2,276	1,489	7,850	9,650
Oklahoma City-Ada-Atoka.....Aug. 8 mos.		246,756	3,829	250,585	67,373	18,623	7,853	94,158	13,951	76.0	63,741	29,677	31,155	13,699
Pennsylvania Railroad.....Aug. 10,897		17,656,711	4,732,649	22,389,360	1,841,522	4,933,038	552,070	9,437,102	1,293,760	73.1	6,773,414	3,740,304	2,627,697	4,700,679
Pennsylvania Railroad.....Aug. 8 mos.		156,866,887	41,925,551	208,792,438	18,361,627	44,982,725	5,069,882	84,810,667	11,370,646	74.8	56,380,271	36,383,020	28,862,966	32,894,576
Long Island.....Aug. 399		472,657	1,978,162	2,450,819	184,736	287,803	11,468	938,011	55,908	57.0	1,113,783	770,254	594,320	926,054
Long Island.....Aug. 8 mos.		4,504,653	13,938,468	18,443,121	1,458,726	2,718,860	108,687	8,235,850	459,085	66.5	6,525,997	4,830,018	3,389,543	5,419,049
Peoria & Pekin Union.....Aug. 17		10,566	Dr.	10,566	7,469	8,273	1,683	30,354	11,325	86.5	9,224	3,776	20,274	12,851
Peoria & Pekin Union.....Aug. 8 mos.		74,339	3	74,342	62,024	61,349	15,497	270,254	65,453	85.5	80,698	44,663	143,543	148,681
Pere Marquette.....Aug. 2,320		1,440,224	101,472	1,541,696	241,842	388,745	63,420	653,704	90,814	87.0	216,682	83,052	43,415	101,017
Pere Marquette.....Aug. 8 mos.		12,588,092	637,309	13,225,401	1,986,152	3,172,577	501,432	5,804,025	812,319	87.5	1,769,046	669,390	86,842	896,936
Pittsburgh & Shawmut.....Aug. 102		73,897	220	74,117	7,651	23,223	1,522	18,168	5,954	75.6	17,021	17,021	13,807	7,234
Pittsburgh & Shawmut.....Aug. 8 mos.		495,166	4,595	500,761	74,525	175,563	12,370	135,123	32,493	84.9	76,571	67,739	60,180	137,560
Pittsburgh & West Virginia.....Aug. 138		168,704	49	168,753	20,384	46,799	12,098	34,957	14,421	75.8	43,264	30,062	58,653	40,815
Pittsburgh & West Virginia.....Aug. 8 mos.		1,324,874	728	1,325,602	153,199	433,742	113,759	304,729	115,324	82.2	257,557	86,488	222,415	446,372
Pittsburgh, Shawmut & Northern.....Aug. 197		61,427	199	61,626	18,213	16,851	1,345	25,257	6,260	107.2	4,545	7,138	12,815	24,656
Pittsburgh, Shawmut & Northern.....Aug. 8 mos.		598,399	2,104	600,503	143,586	154,632	12,756	243,843	53,555	98.2	10,833	9,372	41,164	146,680
Reading.....Aug. 1,461		3,202,209	238,178	3,440,387	239,571	650,600	74,566	1,452,930	181,965	68.8	1,185,347	1,088,876	1,069,719	446,073
Reading.....Aug. 8 mos.		29,269,209	2,332,972	31,602,181	3,156,578	7,470,936	628,363	14,147,274	1,540,231	78.8	7,281,329	6,395,212	6,172,282	3,342,484
Atlantic City.....Aug. 163		63,118	221,088	284,206	6,663	22,151	5,223	142,839	3,676	59.9	121,185	82,815	65,889	128,411
Atlantic City.....Aug. 8 mos.		540,808	743,069	1,283,877	184,761	444,006	26,015	1,000,524	31,036	100.8	10,708	324,124	376,091	321,390
Richmond, Fredericksburg & Potomac.....Aug. 117		214,015	78,634	292,649	34,155	81,096	8,421	172,616	26,910	87.9	45,450	22,671	8,520	11,753
Richmond, Fredericksburg & Potomac.....Aug. 8 mos.		2,589,987	1,123,760	3,713,747	417,146	931,216	73,694	1,806,477	248,577	77.6	1,027,657	767,273	384,191	1,053,472
Rutland.....Aug. 413		215,847	46,911	262,758	77,002	64,447	9,618	133,804	13,686	84.0	56,279	36,279	41,957	61,021
Rutland.....Aug. 8 mos.		1,631,658	332,125	1,963,783	475,015	514,960	84,947	1,102,926	114,598	86.6	332,358	180,136	207,174	159,846
St. Louis-San Francisco.....Aug. 5,266		2,883,595	271,360	3,154,955	468,166	718,744	95,631	1,135,753	153,915	75.4	844,919	651,335	558,039	1,081,001
St. Louis-San Francisco.....Aug. 8 mos.		22,354,385	2,216,527	24,570,912	3,733,261	6,016,913	799,400	9,716,746	1,328,413	80.5	5,257,593	2,697,825	2,228,986	7,446,372
Ft. Worth & Rio Grande.....Aug. 233		34,664	1,484	36,148	21,992	13,490	2,440	22,335	3,891	154.9	22,730	27,335	32,220	26,289
Ft. Worth & Rio Grande.....Aug. 8 mos.		258,181	12,290	270,471	144,018	98,845	22,058	195,217	31,580	154.4	173,131	210,165	271,380	232,586
St. Louis, San Francisco & Texas.....Aug. 262		76,944	304	77,248	18,520	21,724	4,716	35,111	7,409	108.8	7,058	11,539	37,857	4,142
St. Louis, San Francisco & Texas.....Aug. 8 mos.		634,971	4,153	639,124	158,672	196,405	41,238	324,773	59,449	109.4	63,304	99,474	331,365	187,766
St. Louis Southwestern Lines.....Aug. 1,913		814,314	21,357	835,671	162,332	196,015	79,579	345,520	70,702	97.2	24,810	65,449	169,491	250,547
St. Louis Southwestern Lines.....Aug. 8 mos.		7,634,389	156,988	7,791,377	1,191,854	1,413,152	645,728	3,036,294	711,377	84.8	1,264,134	574,845	345,077	1,460,727
San Diego & Arizona.....Aug. 155		35,345	5,716	41,061	8,401	9,974	1,841	16,565	4,430	96.2	1,619	1,635	131	10,851
Seaboard Air Line.....Aug. 4,406		17,082,207	1,932,325	19,014,532	3,463,218	4,571,359	1,183,457	8,157,779	1,163,858	88.8	2,369,517	656,184	79,811	2,464,549
Southern Ry.....Aug. 6,711		4,396,958	668,680	5,065,638	783,865	1,373,118	149,325	2,176,000	258,194	85.8	792,108	267,952	157,327	963,872
Southern Ry.....Aug. 8 mos.		37,989,926	5,592,575	43,582,501	7,428,564	11,697,543	1,340,220	18,964,265	2,581,178	87.7	5,911,504	1,547,292	399,511	5,663,541
Alabama Great Southern.....Aug. 315		242,777	40,516	283,293	48,659	86,084	11,698	116,457	14,862	92.4	24,034	14,482	4,426	40,800
Alabama Great Southern.....Aug. 8 mos.		2,105,315	365,259	2,470,574	521,308	886,097	92,510	1,073,201	142,990	100.9	24,673	332,393	322,379	238,027
Cincinnati, N. Orleans & Tex. Pac. Aug. 337		651,787	62,430	714,217	86,423	207,386	24,588	226,751	40,300	77.6	170,063	118,527	139,565	354,549
Cincinnati, N. Orleans & Tex. Pac. Aug. 8 mos.		5,862,292	542,316	6,404,608	1,018,281	1,871,795	205,821	2,050,107	356,661	80.7	1,324,515	871,473	939,149	1,514,474

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## Lbs. Versus Pounds

A FEW *lbs.* of HUNT-SPILLER *Air Furnace* GUN IRON, or those clanking, banging destructive locomotive *pounds* which require unceasing roundhouse attention—early replacement and run up maintenance costs to a prohibitive figure?

A few *lbs.* of HUNT-SPILLER *Air Furnace* GUN IRON for those vital parts which must absorb initial shocks and wear or the continuous application of those ordinary wearing materials which offer little resistance to wear and fail quickly under modern operating conditions?

Weigh carefully your selection of materials for such parts as Crosshead Shoes, Outer Rod Bushings, Hub Liners, Pedestal Shoes and Wedges. A *lb.* of HUNT-SPILLER *Air Furnace* GUN IRON will take you farther than many *lbs.* of cure.

**HSGI**

Reg. U. S. Trade Mark

Cylinder Bushings  
Cylinder Packing Rings  
Pistons or Piston Bull Rings  
Valve Bushings  
Valve Packing Rings  
Valve Bull Rings  
Crosshead Shoes  
Hub Liners  
Shoes and Wedges  
Floating Rod Bushings

Parts Finished for  
Application

Dunbar Sectional Type  
Packing  
Duplex Sectional Type  
Packing  
(Duplex Springs for Above  
Sectional Packing)  
Cylinder Snap Rings  
Valve Rings All Shapes

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*Air Furnace* **HUNT-SPILLER  
GUN IRON**

## Revenues and Expenses of Railways

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1932—CONTINUED

Name of road	Av. mileage operated during period.	Operating revenues			Operating expenses				Operating income (or loss).	Net from railway operation.	Net ry. operating income, 1931.		
		Freight.	Passenger.	Total	Maintenance of way and structures.	Traffic.	Trans- portation.	General.				Total.	
Georgia Southern & Florida.....	397	\$99,921	\$14,693	\$128,722	\$24,300	\$40,452	\$43,673	\$2,121	\$113,948	88.5	\$14,774	\$8,693	
Aug. ....	397	1,010,552	190,602	1,327,852	263,769	355,527	469,170	18,426	1,143,541	86.1	184,281	88,086	
New Orleans & Northeastern.....	204	123,835	21,846	157,462	25,349	42,979	61,397	9,761	146,726	93.2	10,736	31,534	
Aug. ....	204	1,054,334	189,793	1,356,289	253,303	381,499	553,381	86,916	1,344,075	99.1	12,214	319,848	
Northern Alabama .....	99	28,184	857	30,523	10,016	1,162	12,867	1,816	26,693	87.5	3,830	7,848	
Aug. ....	100	276,792	9,257	298,592	89,105	11,160	115,259	17,676	242,851	81.3	55,741	58,746	
Southern Pacific .....	9,101	6,256,440	1,498,112	8,592,166	917,766	1,544,380	2,894,422	3,153,929	6,637,287	77.2	1,954,879	1,971,905	
Aug. ....	9,104	52,127,436	13,113,718	72,155,390	8,027,547	13,166,249	26,863,478	4,439,310	56,402,830	78.2	15,752,560	13,881,399	
So. Pac. Steamship Lines.....	....	292,122	34,240	341,133	16,790	89,735	17,828	264,452	21,831	104,636	120.4	69,503	56,262
Aug. ....	....	2,599,930	200,224	2,947,990	124,418	896,473	2,298,684	235,076	3,680,360	125.1	741,370	667,421	
Texas & New Orleans .....	4,602	1,864,620	293,864	2,460,151	401,905	492,686	1,133,578	200,907	2,138,210	86.9	321,941	98,536	
Aug. ....	4,618	16,196,741	2,240,975	20,969,662	3,442,046	4,333,684	1,030,709	7,953,482	1,814,150	1,668,082	89.1	2,288,580	1,919,868
Spokane, Portland & Seattle.....	552	391,889	42,892	475,834	63,476	89,735	17,828	264,452	21,831	104,636	120.4	69,503	56,262
Aug. ....	554	2,581,835	303,601	3,221,112	404,881	674,880	1,196,546	172,886	3,159,088	66.5	159,449	85,192	
Tennessee Central .....	295	125,120	5,437	138,766	21,121	20,206	50,805	10,884	110,726	79.8	28,040	164,586	
Aug. ....	295	1,082,605	37,289	1,185,492	201,355	174,029	458,993	81,524	966,724	81.5	218,769	161,641	
Terminal R. R. Assn. of St. Louis.....	55	....	429,817	60,452	35,055	3,834	215,248	16,877	333,893	77.7	95,024	79,664	
Aug. ....	55	....	3,794,755	496,992	258,135	3,794,755	496,992	151,844	2,850,323	75.3	935,422	1,213,959	
Texas & Pacific .....	1,950	1,325,275	174,444	1,694,839	274,664	66,276	517,692	108,034	1,142,530	67.4	552,300	472,527	
Aug. ....	1,950	10,767,708	1,585,275	13,968,827	1,405,215	2,539,902	557,290	4,522,399	876,506	10,035,351	71.8	3,935,476	3,005,056
Texas-Mexican .....	162	38,351	1,830	45,052	10,529	12,152	3,075	24,703	56,858	126.2	11,806	17,099	
Aug. ....	162	426,793	6,639	479,820	80,913	91,947	25,111	175,960	53,727	427,492	89.1	52,328	10,565
Toledo, Peoria & Western .....	239	144,385	39	146,448	40,795	20,893	13,158	37,005	120,990	83.4	24,356	9,299	
Aug. ....	239	921,663	340	937,834	205,950	90,675	100,368	315,390	78,343	794,726	84.7	143,108	48,130
Toledo Terminal .....	28	....	52,264	7,104	10,780	459	25,653	4,866	48,868	93.5	3,396	5,056	
Aug. ....	28	....	504,039	40,955	93,007	4,054	23,780	38,136	419,826	83.3	84,213	201,382	
Union R. R. of Penna.....	45	....	146,677	54,600	55,095	242	26,684	13,178	242,785	165.3	96,114	133,950	
Aug. ....	45	....	1,347,733	380,993	751,075	1,210	782,193	109,749	2,025,220	150.3	677,487	734,221	
Union Pacific .....	3,768	4,635,890	586,437	5,720,694	672,401	1,011,899	1,624,490	272,466	3,864,572	67.6	1,856,122	1,503,929	
Aug. ....	3,768	33,336,372	4,328,729	42,030,939	3,573,568	8,343,644	13,413,416	2,385,613	29,413,060	70.0	12,617,879	8,633,294	
Oregon Short Line.....	2,506	1,347,409	115,814	1,590,179	195,680	34,280	521,707	96,453	1,064,780	67.0	525,399	226,774	
Aug. ....	2,506	10,401,888	986,465	12,464,507	1,571,798	1,856,646	4,430,067	846,190	9,066,052	74.3	3,198,455	1,163,220	
Oregon-Wash. R. R. & Nav. Co.....	2,338	1,043,779	91,849	1,266,190	140,142	167,588	483,942	88,498	940,608	74.3	325,582	184,126	
Aug. ....	2,338	8,869,011	799,343	8,759,976	1,294,650	1,426,539	3,948,941	780,669	7,879,731	90.0	880,245	350,625	
Los Angeles & Salt Lake.....	1,249	936,976	190,837	1,252,293	83,624	163,065	385,309	60,501	769,911	61.5	482,382	217,254	
Aug. ....	1,249	8,032,288	1,346,277	10,256,584	986,411	1,466,322	4,262,268	334,307	7,020,683	68.5	3,235,901	1,033,899	
St. Joseph & Grand Island.....	258	167,497	2,583	180,835	23,303	24,711	65,592	13,984	130,220	72.0	50,615	42,516	
Aug. ....	258	1,336,977	24,632	1,436,952	188,793	186,678	508,448	115,300	1,019,433	70.9	417,519	318,207	
Utah .....	110	47,581	....	47,665	12,650	18,826	20,218	4,419	48,383	101.5	7,718	5,521	
Aug. ....	111	629,984	....	632,462	99,817	186,072	3,044	38,181	479,745	75.8	152,717	103,508	
Virginian .....	608	976,276	5,663	1,026,675	112,140	198,061	193,300	31,829	548,587	53.4	478,088	353,082	
Aug. ....	608	7,877,164	54,773	8,334,631	858,825	1,234,763	129,535	233,147	4,552,158	54.6	3,782,473	3,156,281	
Wabash .....	2,523	2,387,662	193,484	2,771,044	415,241	505,406	1,214,618	145,049	2,437,207	88.0	333,837	224,037	
Aug. ....	2,523	21,503,353	1,733,213	25,102,570	3,632,975	4,224,471	10,891,153	1,311,540	21,425,673	85.4	3,676,897	1,995,772	
Ann Arbor .....	293	222,181	4,539	242,343	32,351	49,002	104,396	11,094	208,952	86.2	33,391	18,147	
Aug. ....	293	2,000,303	28,138	2,106,062	289,931	423,892	107,252	93,501	1,848,380	87.8	257,682	114,247	
Western Maryland .....	892	839,461	10,380	891,170	56,643	152,482	31,083	32,862	485,487	54.5	405,683	338,806	
Aug. ....	891	7,404,016	66,621	7,926,109	984,783	1,447,180	313,700	316,568	5,158,795	65.1	2,767,314	2,151,085	
Western Pacific .....	1,163	849,349	50,633	962,218	157,730	143,905	341,119	36,917	774,187	80.5	188,031	96,439	
Aug. ....	1,163	5,796,231	306,334	6,559,266	995,287	1,345,690	2,889,030	305,710	6,228,214	95.0	331,052	384,825	
Wheeling & Lake Erie.....	511	743,293	2,329	748,421	58,081	181,616	27,206	28,443	518,389	65.9	268,032	154,887	
Aug. ....	511	5,013,298	27,188	5,327,072	634,668	1,439,647	1,807,026	232,069	4,355,289	81.8	971,783	314,778	
Wichita Falls & Southern.....	203	46,226	24	47,582	7,083	11,694	12,968	3,223	34,710	72.95	12,872	8,703	
Aug. ....	203	363,291	389	378,340	79,302	60,685	104,997	26,943	286,555	75.74	91,789	58,429	